

INTERPRETATION OF ENGLISH IDIOMS BY
INDIAN AND NON-INDIAN CHILDREN

A Thesis

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by

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ABSTRACT

This study compared the performance of four groups of children--two Indian groups and two non-Indian groups--on a test of commonly used idioms. The Indian subjects, all bilingual, were differentiated on the basis of school setting, uni-ethnic or multi-ethnic. The non-Indian subjects, all from multi-ethnic schools, were differentiated on the basis of linguistic background, bilingual or monolingual.

The sample consisted of 465 children in grades five, six, and seven from six schools in Northern and Central Saskatchewan. The Yandell Idioms Test was administered to all the children. Differences among mean scores of the groups were tested with an analysis of variance. In addition, to minimize the effects on the Idioms Test results of very high or very low reading ability, a second analysis was done involving a selected sample identified from within the total sample by excluding all subjects who scored below the 4.0 grade level or above the 7.9 grade level on the Gates-MacGinitie Reading Tests.

Analysis of Idioms Test scores revealed that Indian children in multi-ethnic schools scored higher than Indian children in uni-ethnic schools, but that non-Indian children, whether bilingual or monolingual, achieved significantly better than Indian children in either multi-ethnic or uni-ethnic settings. Monolingual non-Indian children scored

higher than bilingual non-Indian children, although for the selected sample, the differences were not statistically significant.

In both analyses, there seemed to be few sex differences of importance. Between-group differences generally reflected the trend for the whole-group analyses, while within-group differences were not significant except for the bilingual non-Indian group.

In general, the study showed that not only did Indian children have difficulty with the comprehension of English idioms, but that many English idioms used in basal readers were not familiar even to monolingual English-speaking children.

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Chapter 1

THE PROBLEM

PURPOSE OF THE STUDY

This study compared Indian bilinguals with non-Indian bilinguals and with non-Indian monolinguals in their ability to understand idioms commonly encountered in reading English.

The general question to be answered was: Do Indian bilinguals, non-Indian bilinguals, and non-Indian monolinguals differ significantly in their ability to interpret English idioms?

To answer the general question, the following groups were compared:

1. Bilingual Indian children educated in a uni-ethnic school setting.
2. Bilingual Indian children educated in a multi-ethnic school setting.
3. Bilingual non-Indian children educated in a multi-ethnic school setting.
4. Monolingual non-Indian children educated in a multi-ethnic school setting.

BACKGROUND OF THE STUDY

Although there is some evidence to show that Canadian Indian children have difficulty with reading, very little

research has been done to discover the specific nature of their difficulties.

A report by Colliou (1966) of a nationwide survey of the reading ability of Indian children in uni-ethnic Federal schools showed that although Indian children were on the average older than children of Provincial schools in the same grade, they scored consistently lower than test norms for the grade. Their weakness in reading was, therefore, even more marked when they were compared with non-Indian children of their own age.

The attempts made to help teachers of Indian children to improve classroom programs in reading have been based mainly on techniques and materials that might be used with any child who has a reading problem. Research is very limited about what specific problems, if any, handicap Indian children as a group as they learn to read English.

Many approaches might be made to the problem of understanding the difficulties of Indian children as they learn to read English. One potentially fruitful avenue of exploration seems to be through the specifics of language.

Researchers in New Mexico, where Indian children face multi-faceted educational problems as do Canadian Indian children, have been seeking answers in approaches that place emphasis on factors that link language and culture. They suggest, in fact, that language and culture are so intermingled as to be inseparable and that studies should focus on

the features of language that are specific to the culture (Zintz, 1960:96). Within this frame of reference, several studies have explored the problems that are created for readers of English as a second language by common idioms (Yandell, 1959), analogies (Mercer, 1960), antonyms (Dudding, 1961), and multiple meanings (Hess, 1963). The results show that both Indian and Spanish American children educated in multi-ethnic settings have more difficulties with such features of the language than do English monolinguals ("Anglos") educated in the same multi-ethnic settings. As a result of such studies, it has been recommended that specific provision be made in the curriculum for specific minority groups.

The present study was undertaken to pursue the line of investigation opened by researchers in New Mexico and to explore the abilities of certain groups of Indian children and certain groups of non-Indian children to interpret common English idioms when they encounter them in reading.

IMPORTANCE OF THE STUDY

During a period of time when minority groups are seeking equality of opportunity in almost every country in the world, it becomes increasingly apparent that no community can, in fact, suggest that it affords equality of opportunity to minorities if such minorities suffer from an inability to acquire the same level of education as the majority group.

The community, for the good of all, must be actively involved in seeking solutions to the problems of minorities in educational settings.

Vague objectives should be translated into positive action directed at correcting the specific identifiable weaknesses from which school pupils suffer. Rather than being told that Indian children have trouble in school because they are bilingual, teachers should have information about what aspects of English create difficulties for bilingual Indian students, if, in fact, such specific difficulties exist.

The present study would, it was considered, be very useful in planning school programmes in which Indian and non-Indian children are to be educated together. If no differences existed between the groups, this should be known. If clear differences were to be found, specific planning would be required for provision of the needed instruction.

SETTING AND POPULATION

A large part of the Indian population of Central and Northern Saskatchewan lives on reserves where an Indian language often is the first language spoken. In some cases, the children attend Federal schools on the reserve and are, therefore, educated in a uni-ethnic setting. In other cases, the children are transported to Provincial schools and educated in a multi-ethnic setting with non-Indian children.

In all the schools the Provincial curriculum forms the basis for instruction and instruction is given in English. In either situation, the Indian child must become bilingual.

The sample selected for this study on English idioms involved four definable groups: (1) Indian bilinguals being educated in a uni-ethnic setting, (2) Indian bilinguals being educated in a multi-ethnic setting, (3) Non-Indian bilinguals being educated in a multi-ethnic setting, and (4) Non-Indian monolinguals being educated in a multi-ethnic setting.

DELIMITATIONS OF THE STUDY

The following are recognized as some of the possible delimitations of the study:

1. The study was limited to 217 bilingual Indian children and 248 bilingual and monolingual non-Indian children in Grades five, six, and seven in uni-ethnic and multi-ethnic schools in central and northern Saskatchewan.
2. Ability to interpret idioms was tested on only one test--Yandell's Idioms Test.
3. The idioms on which the children were tested were limited to the ninety items included on the test, all of which had been selected from commonly used basal readers.

DEFINITION OF TERMS

For the purpose of this study, several terms need to be defined.

Bilingual

The term "bilingual" in this study is used in its broadest sense, that is, using or able to use two languages without qualification as to the degree of fluency in each language.

Idiom

Idioms are expressions of phrases peculiar to a language. They can rarely, if ever, be interpreted literally or translated literally into any other language, and their meaning cannot be deduced from their component parts. Adkins (1968) developed the definition comprehensively:

They are the basis for understanding the language, since they constitute a large part of it . . . Such examples as "to make a beeline for," meaning to take the shortest route, and "to be short-handed," meaning to have insufficient help, are typical examples of idioms which cannot be understood from their grammatical construction. Other idioms are composed of verbs and prepositions, such as "to fill in," meaning to substitute for or to complete the blanks on a form, or composed of verbs and adverbs such as to "look forward," meaning to anticipate. Idioms have meanings other than the customary meanings of the words which compose them.

Indian

The term "Indian" in this study refers to children of Indian ancestry who speak their native language in their home.

No attempt is made to distinguish between specific tribal origins.

Non-Indian

In this study the term "Non-Indian" is used arbitrarily to categorize all pupils not of Indian ancestry.

Uni-ethnic Schools

In the context of this study the term "uni-ethnic" refers to schools on Indian reserves. These schools are attended exclusively by Indian children except in cases where children of non-Indian staff members may attend.

Multi-ethnic Schools

In this study the term "multi-ethnic schools" refers to schools under Provincial administration to which Indian children are transported for their education. Financial support is provided by the Federal Government in agreements with Provincial school boards.

Chapter 2

REVIEW OF THE LITERATURE

At a period when Western educators are being called upon to aid certain "developing" countries in overcoming their basic literacy problems and so to realize their national potential, there remain serious literacy problems within their own borders.

In the United States and Canada, the idea of elementary education for everyone has been an accepted goal for a great many years and higher education on the same universal basis can be discussed as a not impossible goal. Yet there remain within the borders of both countries problems of literacy that make it impossible for certain definable groups to share fully even in the benefits of adequate elementary education. Among such groups are children who live in homes where the spoken language is markedly different from the language of the school they attend. Although some evidence has been gathered about the effects of bilingualism and of substandard English, the problem of language in school and its relation to school achievement are by no means well understood.

The approach to the problem taken in the research reported in this study was through what might be termed a "language specific," the English idiom, a linguistic unit that is often taken for granted by native speakers, but which, it

seems, may be a source of difficulty to both native and bilingual speaker.

The review of literature for this study is devoted to two main topics: (1) the phenomenon of bilingualism, and (2) the idiom in the English language. The chapter begins with an examination of the broad implications of bilingualism and includes studies related to the linguistic functioning of bilinguals. The section on bilingualism is followed by a review of the literature exploring the nature of the idiom and examining opinion and research related to the idiom.

THE PHENOMENON OF BILINGUALISM

Since the fact of bilingualism is of some significance in this study, it was thought that a review of the literature regarding this phenomenon might contribute to the understanding of the language situation as it exists in the context of this research. Perhaps, too, it will help clarify some of the problems characteristic of second language learning and the education of the bilingual child.

Bilingualism in Its Broadest Implications

Any approach to reviewing the literature on bilingualism makes it evident that it is a topic of very wide interest. It has been explored by researchers in the fields of psychology, anthropology, political science, linguistics, psycholinguistics--in short, by students in almost every known

field of study. It seems quite clear that bilingualism does have implications for all these fields of study and warrants further research.

A careful assessment of the major reviews of the literature on bilingualism reveals that three reviewers have produced the reviews considered to be the most broadly based and the most all-inclusive available. Although these reviews may seem to have only tangential significance for the present study, a brief summary of the points of view and stances of the reviewers and statements by several other authorities on bilingualism are presented here to provide a frame of reference for the more specific approach to bilingualism as a factor in linguistic functioning presented later in the review.

Jensen (1962), going back as far as 1921, reviewed the literature available in English on the possible immediate and long-range effects of bilingualism acquired during the first eight years of a child's life. He found it very difficult to generalize from the findings. Much of the literature emphasized handicaps to a child's articulation, speech, rhythm, and voice quality, his language development, his intellectual and emotional advancement, and his emotional stability. However, other literature claimed that definite advantages in these same categories accrued from bilingualism or that disadvantages were exaggerated or non-existent.

Jensen questioned the soundness of some of the assertions made and attempted partially to explain such divergent views. He stated that authors had used varying definitions of bilingualism, had analyzed too few subjects or atypical subjects, and had employed greatly varying procedures in gathering data. Jensen also mentioned the possible biases of scholars who might have had narrow and differing purposes in mind when examining childhood bilingualism. He suggested that each investigator seemed to focus his attention on one part of the child. He commented, finally, that all interested groups must expand their vision so that their objectives can be to determine what is best for the "whole person" for his "whole life."

Like Jensen, Macnamara (1966) criticized most of the research done on bilingualism, finding much of it unscientific, particularly from the standpoint of adequate controls. Almost all the studies he reviewed dealt with children or young persons who were learning or had learned two languages simultaneously. Though he found that no categorical conclusions could be drawn, since the majority of findings permitted a variety of interpretations, Macnamara noted that there was some firmly grounded evidence indicating that bilinguals have a weaker grasp of language than monolinguals. He added, moreover, that some findings suggested that the difficulty of bilinguals in learning two languages might be a function of the dissimilarity between the two languages. The bilinguals

in most of the studies Macnamara reviewed were descendants of immigrants who were losing their ancestral tongue and learning a new one. The reviewer speculated that linguistic interference could explain many mistakes of the parents--mistakes bilingual children may have learned from their parents. Putting it simply he suggested that it takes time to learn a language and that perhaps bilinguals had not had enough time to learn the language in which they were being compared with monolinguals, a factor stressed also by Politzer (1960:124). One question not answered by the research, Macnamara noted, was whether or not in later life bilingual children overcame the initial disadvantage to which they seemed subject.

In a review of interpretive studies done on bilingual education, Ulibarri (1969) found much the same conflicting evidence. He noted, as had Jensen, that in the early days of investigating the bilingual child, the findings indicated that the bilingual tended to be inferior in most variables, including intelligence and academic achievement, when compared to a monolingual English-speaking child. Ulibarri submitted that in any attempt to analyze growth and development, consideration should be given to the fact that the overwhelming majority of bilinguals on the North American continent are members of some minority group. He postulated that this factor, perhaps more than bilingualism or biculturalism, accounted for the "stunted growth" apparent among minority group members. Ulibarri reported a general consensus that the bilingual

student, because of his lack of proficiency in the English language, understood less than monolinguals in the classroom because the teaching was so highly verbalized.

Mackey (1967), a Canadian, discussed bilingualism as a world problem: a problem, he claimed, that affects the majority of the world's population. He pointed out that the predominance of a few languages tended to conceal the extent of the bilingual problem and to obscure the fact that millions of people have found themselves in situations where they have been forced to become bilingual. He suggested that because the vast majority of the world's languages have little to offer to the millions now becoming literate, majority languages become even more widespread at the expense of the minority ones. Thus, he pointed out, the culture and language of smaller groups are sacrificed for the advantage of membership in the larger group; that is, people tend to be bilingual through the necessity of becoming "poly-social." Though Mackey listed both the alleged advantages and disadvantages of being bilingual, he stressed that, in many countries, to be educated meant to be bilingual.

Perhaps bilingualism as it has been discussed recently has not the same connotation as the bilingualism discussed in much of the earlier research. Roeming (1971) discussed bilingualism in the context of national interest of the United States and distinguished between the historical and contemporary aspects of bilingualism. He stated that historical aspects of

bilingualism are not relevant to the contemporary social situation. The question of bilingualism in contemporary contexts, he suggested, involves the welfare of a great number of individuals who cannot, because of language limitations, participate fully in the social organization of the country. Referring to Spanish-speaking families and American Indians as well as to a million or more youngsters of school age from thirty additional ethnic backgrounds, Roeming contended that Americans were not confronted with bilingualism but rather with a non-English and non-literate monolingualism. He expressed the primary concern of bilingualism studies in America, therefore, as being to ensure a viable transition from a non-English language to English and to a well-rounded education. Roeming pointed out, further, that in the case of a "primitive tongue" it was not possible to equate such a language with standard German or standard French or other languages supported by the "pillars of literacy." In relation to literacy for bilinguals, he implied that some sort of literacy should be attained in the first language to establish a "base of language" on which standard English proficiency could be developed.

Bilingualism and Linguistic Functioning in a School Setting

Bilinguals have been studied by researchers in regard to many things: intellectual functioning, social adjustment, articulation, and emotional stability to mention just a few.

Since the present study is concerned with a language specific as it relates to the child's performance in school, only those studies dealing with the linguistic functioning of the bilingual in a school setting will be considered. A limited number of studies, reviewed in some detail, include: (1) investigations comparing bilinguals with monolinguals, (2) studies of bilinguals in which the language of instruction is a factor, and (3) studies involving the teaching of English as a second language to improve achievement of bilinguals.

Comparisons of the general school achievement of bilinguals and monolinguals. Of great interest to researchers has been the apparent difficulties many bilinguals experience in the learning process, particularly in learning to read. In order to determine possible causes of these difficulties, bilingual children have been compared with children who have not learned a second language.

Pertinent comments on the reading problems of bilinguals have been made by Tireman (1955) and Timothy (1964). Tireman stated that, generally, the reading problems of most bilingual children arise from the home situation. Specifically, he identified the matter of vocabulary as one of their fundamental reading problems. In its most recognized aspect, Tireman explained, this appeared as a lack of English words; but, in its more subtle aspect, it was revealed as an inability to distinguish between shades of meaning as expressed by words.

Timothy stated that these children have difficulties with meanings of words in readers. She referred to their lack of ability to respond to the language of the school as an instrument of instruction and the confusion they might experience in having to learn different words for the same thing.

In an early study of pre-school vocabulary, Smith in 1926 explored children's total vocabulary by recording sentences spoken and by testing through the use of objects, pictures, and questions. She was able to establish vocabulary norms for each age group. Years later, Smith (1949) attempted to measure the English and Chinese vocabularies used by a group of thirty bilingual Chinese-American children in Hawaii (age range 37-77 months). In either language, the size of the children's vocabularies was found to be below average for children of their age. Even when the total vocabularies of the two languages were added together, only two-fifths of the children exceeded the norms for monolingual children that had been established and later revised by Smith. The study seemed to indicate that a bilingual child was seldom sufficiently advanced by six years of age in either of the two languages he spoke to be as prepared for school instruction as was the average monolingual child. The average bilingual child, Smith felt, knew fewer words than the monolingual child and used them more incorrectly. Smith suggested that only the superior bilingual child is capable of attaining the vocabulary norms of monoglots and that perhaps a name for each of a large

number of concepts is more desirable than two names for many of a smaller number of concepts. Smith did point out, on the other hand, that if a child lives in a bilingual environment he does benefit to some degree from his ability, even if inadequate, to converse in both languages.

A comprehensive and carefully designed study was carried out by Carrow (1957) who compared fifty bilingual (Spanish and English) and fifty monolingual (English) third-grade children similar in age, socio-economic status, and intelligence. Using the California Test of Achievement (Primary), the Durrell-Sullivan Reading Capacity Test, (Primary, Word Meaning), and the Gilmore Oral Reading Test, Carrow found no significant differences in silent reading vocabulary, silent reading comprehension, oral reading rate, and spelling. There were, however, significant differences in favor of monolinguals in oral reading accuracy, oral reading comprehension, hearing vocabulary, and arithmetic reasoning. In oral language functioning (judged by a three-minute sample of oral language recorded on tape for each subject) there were no significant differences in verbal output, clause length, and sentence structure, but there were significant differences in favor of the monolinguals in speaking vocabulary (number of different words spoken), which supports Smith's findings. Numerous errors in articulation and grammar suggested that bilingual children were experiencing difficulties from their two-language heritage. The nature of their

difficulties suggested further that these difficulties sprang from confusions of linguistic and sound patterns of the Spanish and English languages.

Carrow concluded that, in the bilingual group studies, bilingualism had a deleterious effect on those aspects of language development related to vocabulary and articulation. She suggested, however, that a differentiation should be made between the language difficulties stemming from bilingualism, per se, and those stemming from a bilingual environment. It was possible, Carrow said, that the language handicap of the bilingual children in the study could be related to the presence of incorrect or confused language patterns in the home or limited background of language experiences. The implication is that, given a home with a favorable language atmosphere and rich language experience, the bilingual child might experience no problem in either language.

That bilingualism is not necessarily a detrimental factor in school achievement is borne out in a study by Peal and Lambert (1962). A group of 75 monolingual and a group of 89 bilingual ten-year-old children from six middle-class Montreal French schools were compared on the basis of forty-six variables as to intellectual functioning, school achievement, and attitude to the second language community. Only balanced bilinguals were included in the sample, that is, equally skilled in French and English. Contrary to most experimental findings, not only did the bilinguals perform

better than monolinguals on verbal and nonverbal intelligence tests, but the bilinguals as a group were more advanced in school grade (according to teacher ratings) than were the monolinguals. Peal and Lambert point out that their research does not enable them to determine whether the bilingual children became bilingual because they possessed a greater facility for language learning than monolinguals, or whether the learning of the two languages tended to increase the bilinguals' competence in the attainments and skills in which they were tested. The authors speculated that in their initial screening, in which they selected only the balanced bilinguals, they may unintentionally have eliminated the less intelligent bilinguals or those with language handicaps.

In a follow-up to the Carrow study, three groups of thirty seventh and eighth-grade subjects were matched according to intelligence, age, grade, sex, and socio-economic status. The three groups included Mexican-American children who had spoken both Spanish and English at the time they entered kindergarten, and Anglo-American children and Mexican-American children who had spoken only English before entering kindergarten. The findings of Linn's investigation were comparable to those of Carrow. However, unlike Carrow, Linn did find a significant difference in favor of monolingual subjects in silent reading comprehension. Carrow, whose study was done with third-grade subjects, had suggested that a study done with subjects at a higher grade level might reveal that monolingual children

would excel bilingual children in silent reading vocabulary-- a suggestion that Linn's study failed to substantiate. Linn concluded that the language handicap of Mexican-American children who learn two languages before starting school does not diminish as the children mature and progress in school. But, like Carrow, Linn cautioned that the results of the study could not be assumed to be due to bilingualism when unknown ethnic factors in the environment might have been responsible.

Braun (1971) compared the reading achievements of bilingual and native speakers, and also investigated the relationship between language competency (written and oral) and reading achievement. A random sample of 72 children from grades one, four, and six included monolingual Anglo-Saxon, bilingual French, and bilingual German children drawn from three distinctly different ethnolinguistic communities in Manitoba. Monolingual children were superior to their bilingual counterparts in reading performance. Braun noted that the monolingual-bilingual dichotomy was too indefinite to warrant conclusive statements regarding educational implications, since differences in reading scores, in some cases, were as great between bilingual French and German as between monolingual and bilingual subjects. If bilingualism is a factor affecting reading performance, Braun surmised, it is a factor that affects differentially the two bilingual groups. When considering what variables might be involved to produce

this differential, Braun speculated that specific language structures inherent within one language might offer greater potential for syntactic context clues in reading English than structures within another language. Nor did Braun discount the possibility of certain culturally-related rather than language-related environmental factors accounting for at least part of the differential.

Achievement of bilinguals as influenced by a specific language of instruction. The language to be used for instructional purposes in schools has for years been an issue of contention in many world communities. In some cases, educational systems have been given the responsibility of maintaining the viability of a language. Language of instruction, then, and its effect on children's performance in school become critical issues for educational research.

Macnamara (1966) conducted a highly controlled, comprehensive study of the Irish experience of bilingualism in primary education. The situation in Ireland is perhaps unique in that (at the time of the study) Irish national schools devoted an average of 42 percent of the available time over the first six years to the teaching of Irish--a seemingly disproportionate amount of time when one considers that Irish is the second language. The purposes of the investigation were twofold: to discover the effect on achievement in arithmetic of teaching arithmetic through the medium

of Irish to children from English-speaking homes; and to discover the effect on the achievement level in English of the programme for reviving Irish in national schools.

Macnamara's sample was matched for intelligence, socio-economic status, and teacher rating (sources of bias were eliminated by means of regression analysis and covariance analysis). The sample was divided into six groups of near equal size and number of fifth standard boys and girls from a total of 139 schools. Tests in scholastic attainment were confined to Irish, English, and arithmetic.

The use of Irish in teaching arithmetic hindered the progress of English-speaking children in problem arithmetic but not in mechanical arithmetic. Though one might have expected that teaching arithmetic in Irish would have had a beneficial effect on achievement levels in Irish, careful analysis of the data revealed that such was not the case.

It was clear that native-speakers of English in Ireland did not achieve the same standard in written English as did British children who had not learned a second language, not did they achieve the same standard in written Irish as did native-speakers of Irish. Macnamara considered several possible reasons why the Irish children's performance on the English test was poor in comparison with that of British children on whose work the test was standardized. He considered test sophistication, motivation, proportion of urban to city children, and other reasons, but concluded that the

principal reason was the fact that on an average, British children spent more than twice as much time at English as did the Irish children.

Jones (1966) reported on studies investigating bilingualism in relation to children's level of attainment in Wales. Though he stated that Wales is committed to a bilingual policy in the schools, he did not include data, as Macnamara did, on the mean number of hours devoted to each language. On the basis of scores of 2,565 children (10-12 years of age) on Schonell's Silent Reading Test B, Jones (1966:121-127) investigated Welsh children's reading ability in English as a second language. Four linguistic groups were differentiated as mainly Welsh, Mixed-Welsh (Welsh with a considerable degree of English), Mixed-English (English with a lesser degree of Welsh), and mainly English. The results indicated a clear tendency for average reading age in English to decline as the composition of the group became increasingly Welsh. A striking feature in the results was the highly significant difference in favor of the Mixed-Welsh groups over the mainly Welsh groups even after reading scores were adjusted to make allowances for differences in intelligence. There was no reason to believe that the groups differed significantly from each other in social or educational environment. The main difference between these groups in regard to language practice was that the mainly Welsh groups had little opportunity to use English actively in the out-of-school environment whereas the

Mixed-Welsh groups had considerable experience in this respect. Jones pointed out the practical implication of emphasis on the oral aspect of second language learning prior to the reading aspect.

Jones (1966:136-140) summarized a report published in 1960 of a study sponsored by a Local Education Authority in Wales investigating the standard of English attainment of children--251 in urban schools and 283 in rural schools--between ten and eleven years of age in a county where English was virtually a second language to the majority of children. Differences in English attainment between English and Welsh groups of equal intelligence and of similar social status were more significant in rural areas than in urban areas. Performance of the Welsh group in English as a second language was vastly superior to that of the English group in Welsh as a second language. The standard of English attainment for both Welsh and English groups in English Reading Comprehension and in General English Usage were considered to be satisfactory for the county as a whole. Proficiency in oral expression represented the least satisfactory aspect of English attainment on the part of the Welsh group probably because, Jones suggested, many schools devoted their attention to the reading rather than to the oral aspect of English as a second language.

Lambert and Macnamara (1969) described the initial findings of a longitudinal project they conducted in Montreal to teach first-grade English-speaking children in Montreal a

second language (French) that was used as the exclusive language of instruction in the first grade. The experimental group of six-year-olds had oral instruction in French the previous year in Kindergarten. Two first grade control groups taught in their own language were chosen from comparable middle-class neighborhoods: an English group and a French group in the same district. All of the control subjects also had Kindergarten experience, typical for residents of Greater Montreal, where the instruction was in their native language. The groups were matched according to intelligence (Raven's Progressive Matrices) and socio-economic status (interview method), but not on teacher similarity. Extensive testing was done to measure progress in speaking, reading, and arithmetic skills in both French and English.

The experimental class fell clearly below the English control group on tests of English word knowledge, word discrimination, and reading skills though on two of the tests the class still scored at the 50th percentile on the American norms. The class had no difficulty comprehending spoken English. In English-speaking skills, the experimental group was as competent as the controls in overall expression, enunciation, rhythm, and intonation; but they showed more grammatical errors and a slower rate of output of words. Word association in both English and French was as rapid as the controls, but showed less imagination and flexibility. Though they showed good progress in French speaking skills, the

experimental class was definitely poorer than the French control group in speaking French. However, they were as efficient as the French controls in reading tests of word discrimination, sentence comprehension, and word order in French, and were better than the controls in ability to associate sound and printed form of French words. The experimental class did as well as the control classes in arithmetic skills--tested in both French and English. The experiment was to continue through the second and third grades.

Programmes of bilingual education were being tried in the United States in the 1960's. Entwistle (1971) mentioned that there were fifty-eight Spanish-American programmes for Mexican-Americans, ten other Spanish programmes, and eight programmes for Indians, Orientals, French, and Portugese--but that no evaluations had yet been reported.

School achievement of bilinguals as influenced by special programmes of instruction for second language learning.

Children who enter school with no knowledge of scant understanding of the English language are faced with a handicap that can cause great difficulty when English is the sole language of instruction. Unfortunately, few teachers have special training in teaching English as a second language. Furthermore, there has not been much research in this area to help determine direction of programmes.

Talley (1965:52-57) cited The Puerto Rican Study, reported in 1958, that indicated there was no general acceptance of any one methodology of teaching English as a second language to bilinguals in New York City. Three of several methods being used at the time of the study were selected for special experimental emphasis. The three areas stressed were: vocabulary, structure, and experience. The findings of the experiment suggested that the three variants had differential strengths, but that each variant in itself was inadequate in promoting the development of English reading skills in children. To provide an integrated language development, a combination of the three emphases together was recommended by the author of the study.

In an experiment on teaching a second language to beginning Indian children in New Mexico, Condie (1961) sought to determine whether the achievement of beginning Indian children in learning oral English and in readiness for reading could be improved if teachers were trained in effective techniques of second-language instruction. Condie chose his sample of four groups from rural public school kindergartens, designating the students of the previous year as control groups. A vocabulary list of 2,053 words was used as one of the goals of the second-language learning. The teachers of the experimental group made extensive use of pictures, three-dimensional objects, tape recorders, filmstrips, games, finger-plays, flannelboards, and numerous other aids. Furthermore,

regularly scheduled workshops provided training for the teachers in methods of second-language teaching. During the experimental year, a picture vocabulary test was administered periodically and at the conclusion of the experiment the Metropolitan Readiness Test was given. The analysis of results showed a significant difference in favor of three of the four experimental groups.

Zintz (1963:213, 214) has listed the component parts of a school programme of teaching English as a second language: experiences, vocabulary, sentence patterns, imitation of a good speech model in the vernacular, and reading and writing. He mentioned that the teacher would function with greater confidence if he knew something of the phonology, morphology, and sentence patterning in the child's language. Zintz emphasized that, important as it is to acquire vocabulary, it is more important in learning a second language for the student to focus his attention on the structure of the second language and to engage in practice that will form habits of articulation, of stress, of intonation, and of word order. He stressed that reading and writing should not be attempted until skill in understanding and speaking have been established.

A study by Gallegos in 1963, reported by Zintz (1966:137), was concerned with providing a special language program designed to improve vocabulary of sixth-grade bilingual and culturally deprived children. Of thirty-five children in the class, seventeen were children from Spanish-

speaking homes while eighteen were English-speaking children considered to be culturally deprived. The procedure in the special program included three facets: (1) exercises taken from reading workbooks involving such types of language exercises as: Using Different Meanings, Differentiating Various Meanings of Words, Opposite Meaning Words, Categorizing Words, Synonyms, Figurative Language, Interpreting Figurative Language, Simple Analogies, Connotations, Understanding Idioms, and others; (2) illustrations drawn to depict meanings of common multiple-meaning words, completed both as individual and committee assignments and shown to the whole class using an overhead projector, with discussion of sentences explaining specific meanings; (3) slang, idiomatic expressions, common proverbs, similes, and metaphors used in sentences, dramatized, pantomimed, or flashed on screen through the use of an overhead projector for discussion or correction. The distinctive feature of the Gallegos study seems to have been the nature of pupil participation in the language activities, particularly the extensive use of class discussion. Gallegos tested the children after five months of the program, and the mean scores on the California Reading Test showed a growth in years of 1.17 for English-speaking subjects (5.68-6.85) and .93 for Spanish-speaking subjects (4.90-5.83). Considering the pretest low reading test scores, these would seem to be significant gains.

Talley (1965) investigated the effectiveness of special English language instruction on the reading achievement levels and on the mental maturity levels of a group of 123 fourth and sixth-grade bilingual children in the Albuquerque, New Mexico area. The experimental group of 60 children and the control group of 63 children were matched in mental ability, reading achievement, and ability in the use of idioms and multiple meanings. The testing instruments used to secure data during the pretesting and posttesting were the California Short-Form Test of Mental Maturity, the California Reading Test, and four original tests to check pupil knowledge of idiomatic expressions and ability to use multiple meanings of English words.

The intensive language instructional program was implemented with the children in the experimental group for a period of six months and totalled approximately two and one-half hours of time per week. This enriched instruction included the teaching of oral English, study of concepts and vocabulary, multiple meanings of words, and idioms and other figures of speech. Every Monday morning during the period of research each experimental teacher received a pack of materials which included exercises for the week for each reading group with suggestions as to implementation of the work. Control groups maintained their standard language arts programs in their classrooms.

At the completion of the experimental language arts program, the children in both the experimental and control classes were retested in the same areas as the pretests had been conducted, and the following findings resulted:

1. A comparison of the posttest scores of the fourth-grade experimental and control groups on the vocabulary sections of the reading achievement test showed that the experimental group was significantly superior to the control group. Differences between these groups on the comprehension section, however, were not statistically significant.

2. Comparison of the final scores of the sixth-grade experimental and control groups on both vocabulary and comprehension revealed that the experimental group was significantly superior to the control group in general reading ability.

3. The experimental language arts program produced significant changes in the mental maturity scores of the subjects in the experimental group.

4. Significant statistical gains made by the fourth and sixth-grade experimental groups over the control groups, in the areas of ability in using idioms and understanding multiple meanings of words, seemed to indicate that study is needed in these areas by bilingual children in order that such gains may be translated into improvement in reading ability.

Talley concluded that the results of the study appeared to indicate a strong need for a different type of

language program for bilingual pupils than that generally provided to non-bilingual pupils.

Summary of Bilingualism Phenomenon.

Though there is little in the research on bilingualism that is conclusive, there seems to be some evidence that bilinguals have a weaker grasp of language than do monolinguals. Many researchers, particularly in recent years, have suggested possible factors in the bilingual's environment, other than bilingualism, that might affect linguistic functioning and result in the related difficulties that bilinguals seem to have. Programmes of bilingual education have had varying degrees of success depending perhaps on quality of instruction as well as involvement and motivation of student and local community in the program. Apparently bilinguals require modifications in their language arts program to enable them to be successful in coping with current curricula.

THE IDIOM

The facet of language known as the idiom appears to have been a rather elusive component of language study. Murrell (1969) has claimed that the idiom has not received the serious attention it deserves. Parkinson (1967) claimed that there is an area of confusion even among grammarians as to what an idiom actually is, and Halliday (1966:21) remarked that even linguists have often said, in effect, that they just

do not know what an idiom is. The first part of this section, then, explores the nature of the idiom itself and the part following reviews studies related to the idiom.

The Nature and Significance of the Idiom

A careful search for references to the idiom has revealed that statements about the idiom have been made almost entirely by those concerned with second language learning. These statements leave little doubt as to the feelings of these writers that the idiom is significant in the English language, and that the learning of the idiom, though difficult, is vital to the comprehension of that language.

An idiomatic expression is an expression the meaning of which cannot be deduced from the sum of its components, (Wingfield, 1968:231). The definition implies that an idiom must be considered as a single lexical item and cannot be interpreted literally. Parkinson (1967:218) illustrated:

If he knows all the individual words of the phrase to get into hot water, he still has no idea of its meaning, and unless there are strong contextual objections, his most reasonable guess is to take a bath.

When English is one's native tongue, one has learned idiom with what Parkinson calls "the simple language" and the distinction between the idiomatic and literal generally is made automatically without awareness. Jowett (1951:152) has given humorous illustrations of the ambiguity that can arise when, in fact, the idiom is not understood as a single semantic whole--for example, "The town clerk said that he

would have replied if he had not been tied up outside the Town Hall for a few days."

Pei (1966:228) in speaking of the simple verb-preposition combinations, which Smith (1957:172) calls "phrasal verbs,"--such as "tied up," "tied down," "give in," "give up,"--made strong reference to their significance and difficulty:

But to think that these idiomatic combinations are easy to anyone not born to them or brought up with them is one of the worst snares and delusions ever concocted by the human mind. They must be learned, and learned the hard way, if English is to make any sense at all to the foreign learner. The worst feature about them is that their existence and paramount importance is not even generally recognized.

Considering the idiom as a single lexical unit has implications not only for interpretation but also for idiomatic usage; the idiom must be kept intact. McMordie (1966:5), in identifying the idiomatic part of the language as the most difficult for the foreigner to master, warned the foreign student not to be led astray in his use of the idiom:

As a general rule an idiomatic phrase cannot be altered; no other synonymous word can be substituted for any word in the phrase, and the arrangement of the words can rarely be modified; any attempted change in the wording or collocation will commonly destroy the idiom and perhaps render the expression meaningless. Frequently an idiomatic expression omits several words by ellipses; but to fill in the words so omitted would destroy the idiom.

In dealing with the problem of the idiom for second language learners, Parkinson (1967) admonished teacher and student about the necessity for being fully aware that the

idiom is not a mere embellishment of English, but part and parcel of the language; it is not a substitute for a more explicit phrase, but the normal mode of expression. Partridge (1963:53) stressed that idioms belong to the very "core" of the language in English as in other languages, but in English "still more than" in other languages. McMordie and Smith, who prepared extensive lists of idioms, have commented that the English language is particularly rich in idioms--an "inescapable" part of the language, Partridge claimed.

Opinion and Research Related to Idioms

Murrell's claim that the subject of idioms has not received the serious attention it deserves seems justified, since very few studies on the idiom can be found in the literature. The few studies found are reviewed and reference made also to studies dealing with figurative language--a closely related area. The distinction between "idiomatic" and "figurative" language is a fine one. Adkins (1968) defined both but did not distinguish between them. Dechant (1964:341) and other writers seem to use the terms interchangeably when discussing "figurative reading skills." Vizetelly (1923) in the introduction to his collection of idioms wrote that the idiomatic phrase should be distinguished from the figurative phrase in which "ordinary connections or relations are reflected by the words used, but the use is figurative." For example, the simile "The plane soared and

dived like a bird," can be interpreted literally. Furthermore, since it could be translated into another language and still convey the intended meaning, it would probably not be considered idiomatic. Perhaps it could be said that the idiom is figurative in its use, but that not all figures of speech are idiomatic.

A number of writers have suggested that idioms occur frequently enough in school materials to demand specific attention directed to them, and that both native and non-native speakers may have difficulty with them. Heilman (1967:429) claimed that as early as second and third grade, numerous figures of speech and idiomatic expressions appear in basal reader series. Durkin (1970:333) emphasized that figurative use of language becomes more frequent, and therefore more important, as reading materials increase in difficulty.

Opinion alone is hardly adequate evidence to persuade one of the significance of the idiom in reading. A study by Adkins (1968), however, provides startling evidence of the pervasiveness of the idiom in the reading material used in schools. As part of a study on the problems encountered in teaching idioms and figures of speech to non-native speakers of English, Adkins studied the frequency of occurrence of idiomatic and figurative constructions in reading material used by ninth-grade pupils in two high schools (including seventh-grade basal readers used by ninth-grade non-native

English-speaking students in these schools). The investigation revealed that basal readers and social studies materials contained an average of 3.32 idioms and figures of speech per page. Thus an average textbook of four hundred pages would contain a sufficiently high frequency of these expressions to influence comprehension.

Groesbeck (1961) also investigated the figurative language content of reading and social studies textbooks, but at the elementary school level. On the basis of her survey, she found that the numbers of figurative expressions that may be encountered by pupils in their basal reading and social studies textbooks were as follows: grade three, 582; grade four, 837; and grade five, 1,337. She found, also, that comparisons between social studies textbooks and reading series disclosed marked inconsistencies. For example, in grade three there were 212 more figures of speech in reading texts than in social studies texts, while in grade five there were 225 more figures of speech in social studies texts than in reading texts. Invariably, however, figurative content increased from each grade to the succeeding level. Groesbeck commented on the emphasis placed in recent years upon control over the difficulty of reading material in children's textbooks, pointing out that this may be a causal factor in the frequent use of metaphorical rather than the literal meaning of words. She gave illustrations of how one verb could be burdened with several involved meanings such as--"fire

breaking out," "voice broke in," "broke into a run." In establishing criteria to gauge reading difficulty, Groesbeck recommended that recognition be given not only to the difficulty of the vocabulary used, but also to the diversity of meanings conveyed by these words in various contexts.

The opinion that idioms occur frequently in school texts at least as early as grade three, and that their numbers increase steadily as grade levels rise, seems to have been substantiated. Just how many native speakers of English have problems with this aspect of language is less clear. Both Heilman (1967:225) and Boyd (1970:346) seem to be sufficiently convinced about the fact that a problem exists to theorize about reasons for the problem. They have said that although some children can use and understand idiomatic expressions in oral communication, they are confused and fail to get the meaning when they read the same expressions. Heilman suggested, as an explanation of the difficulty, that some readers have developed a habit of expecting the words they read to have literal meanings or that they may have a predilection for concrete meanings. Boyd's explanation suggested that an idiom may represent difficulty because the reader may be often more confused by a familiar word in an unfamiliar sense than by a word that is totally new. Neither Boyd nor Heilman, it may be noted, have pointed to any research to substantiate their views.

The picture for the non-native speaker may be clearer. Scott (1964:489) has said that for the non-native English-speaking student the reading act becomes highly complicated with the occurrence of idioms. If the student must continually resort to the dictionary for the meanings of idioms, his realization of the "literary experience" is inadequate. His approach to a literary selection has been compared by Scott to a child's approach to a jig-saw puzzle. The student finds himself piecing fragments together, the sum-total of which never seems to reproduce the text as a whole.

That the non-native English-speaking student does, in fact, have difficulty with the idiom in his reading is borne out by the evidence. A study of major significance to the present study was carried out in New Mexico by Yandell (1959). She attempted to determine the efficiency of ethnic group children in the use of English idiomatic expressions, and concluded that the linguistic facility necessary for the understanding of these expressions was lacking.

In the Yandell study a multiple-choice test of ninety items was constructed, taking idiomatic expressions from commonly used fourth, fifth, and sixth-grade readers. The test was administered to 516 pupils in the sixth grade in selected schools of Gallup-McKinley County in New Mexico. Included in the group were 224 Navajos, 164 Anglos, 76 Spanish, and 52 Zuni. To establish norms for comparison purposes, the test of idioms was also administered to a control sample of

390 sixth-grade Anglo children in selected schools in Waterloo, Iowa, and in Albuquerque, New Mexico. It was found that there was a significant difference between the means of the Gallup-McKinley County Navajo, Anglo, Spanish, and Zuni groups and that of the control group. The Anglo children earned a median score of 68, which ranked at the thirtieth percentile when compared with the control group; the Spanish-American students earned a median raw score of 49, ranking at the fifth percentile; the Zuni children earned a median raw score of 39, ranking at the second percentile; and the Navajo children earned a median score of 30, ranking at the first percentile.

As an additional step in the study, a comparison was made of reading level and Idioms Test scores. A sample was taken from the two largest ethnic groups in the study--Anglos and Navajo--from schools where reading test scores (Stanford Achievement) were available. To minimize the effect of generally poor reading ability, students having average reading scores lower than 4.0 were excluded from the sample. A very high positive correlation was found between the reading levels and scores on the Idioms test for both Anglo and Navajo pupils, though the Anglo correlation was lower. Yandell concluded that there was a definite relationship between reading ability and the ability to interpret idioms for the Navajo and Anglo pupils.

Aside from the fact that Yandell was the first to explore the idiom as an aspect of language relating to reading

comprehension, the study assumes importance because it has made available a test that is usable in studies of other populations.

Holmes (1959) investigated the understanding that fifth-grade children in an all-Negro school had of figurative language they encountered in the basal reader and in a geography book. The twenty-six subjects were tested individually, using a personal interview method with the responses recorded on answer sheets. Holmes found that students develop different understandings of the same terms even in the same class under the direction of the same teacher. She noted that students appear to understand figurative expressions in the basal reader better than those found in the geography textbook perhaps because the expressions in the basal reader are more "taught." Holmes recommended that teachers be more alert in recognizing figurative expressions, that they give more time to teaching them, and that students be given more time to express orally their understanding of figurative expressions.

Groesbeck (1961) selected an experimental group of pupils from third, fourth, and fifth-grade classrooms who were given a total of two hundred minutes of instruction in the interpretation of figurative language. Lessons were twenty minutes in length and were presented twice weekly over a period of five weeks. The ability of these pupils to apply the knowledge thus gained to the interpretation of figurative meanings encountered in other school work was compared to the

ability of a control group. Four weeks following the presentation of the lessons, all pupils were administered posttests on the interpretation of figurative language composed of items taken from their social studies and basal reading textbooks. There were highly significant differences between posttest scores of experimental and control groups. This finding seemed to give strong support to the conclusion of some researchers that elementary school children have ability to generalize and to apply generalizations to later learning. In this study third, fourth, and fifth-grade pupils clearly had the ability to profit from training in the understanding of figurative language.

Zintz (1970:337) reported a study designed as a follow-up to the Yandell investigation. In 1967, sixth graders in the same school system were measured on the same test used in the 1959 study. This time two hundred nine monolingual English speakers earned a median raw score of 65, one hundred four students with Spanish surnames earned a median raw score of 55, seventy-six Zuni students earned a median score of 53, and two hundred sixty-six Navajo students earned a median score of 31. These scores, when compared with the 1959 results, showed that both Spanish surnamed children and Zuni children had made encouraging progress in the use of idiomatic expressions during the eight years between the two studies.

Zintz drew some generalizations, commenting that the noticeable decline in Anglo scores might be an indication that teachers concentrated on the teaching of English to students of the minority groups to the neglect of the English-speaking students. He pointed out that the effect of any teaching of English as a second language had not produced the improvement in the Navajo students that it had produced in the Spanish-American and Zuni children.

Adkins (1968) also gave evidence that non-native speakers have problems with idioms. Having discovered a reasonably high frequency of idioms and figures of speech in the textbooks used by pupils, Adkins constructed a test to assess pupils' understanding of these constructions. Results of the testing showed that students were deficient to the point of being handicapped in the ability to comprehend the contexts in which the expressions appeared.

A follow-up investigation was conducted by Adkins to determine whether the direct teaching of idioms and figures of speech was practical. The six weeks experiment had as its sample fifteen ninth-grade Spanish-speaking students in El Paso, Texas, who were two years behind their normal grade level in reading achievement. The teaching method was based on the idea that it would be of more value to give students a broad understanding of the nature of idiomatic and figurative language and to encourage them to guess at the meaning

from the context than to try to teach them meanings of specific idioms.

There were three main steps in the teaching, which made use of articles from a current events magazine. First, after the teacher had summarized a news item, the students read the story silently and then discussed the vocabulary and asked questions. Next, students used the dictionary to find lexical meanings and noted the changed meanings. Finally, students used an expression in an original sentence which later was reinforced by oral use. Sessions with the student were held daily, with a different news story read each week.

Using the same procedure as in the pretesting, a post-test of sixteen items was given to test students' ability to interpret constructions not encountered previously. Comparison of results showed an improvement of from 37.3 to 64.6 percent--an increase of 27.3 percent--from pretest to posttest. Adkins concluded that the investigation had demonstrated the practicability of using formal methods of instruction to teach idiomatic and figurative language structure.

A later study by Adkins (1970) resulted from the observation that a third-grade group of native speakers of Spanish in an English-speaking class were uninterested and did not benefit from their reading because they were not stimulated by the material. Further, there seemed to be little comprehension of the story they were "reading" in the

English language. The purpose of the study was to test the validity of the hypothesis that the material "was not germane to their education nor suitable for their progress in learning English." The sample included sixty-two children of third-grade level in El Paso, Texas--thirty-one native English speakers and thirty-one Spanish speakers.

Forty-five idiomatic or figurative expressions were chosen from an assigned story in the third-grade basal reader, Looking Ahead. The story chosen was divided into sections, each of which contained some idiomatic expressions, and questions for comprehension written to follow each section. Children read each section and then reviewed the questions for the section. A test of idiomatic comprehension was given as each section was completed, before the children began the next portion of the story. For the testing the children were given answer sheets with forty-five numbered blanks corresponding to the forty-five expressions. The first expression was read aloud by the tester and the subjects were told to "tell me what you think this means." The time taken to complete the project was from four to six weeks.

Adkins found the error means relatively high for both groups. However, the mean for the native Spanish-speaking group was notably higher--10.62 vs. 6.93. This indicated to the author that the so-called bilingual children had less exposure to idioms as they appeared in the reading material than had monolingual English-speaking children.

Adkins commented that if the reading material presented to a child in no way resembles the language he knows and uses, the material is at fault. She pointed out the necessity for a curriculum that demands emphasis on oral language, and recommended creative dramatics and role playing as possibilities for leading the child into incorporating more difficult elements of the language into his speaking vocabulary. The learning activities of bilingual children must be structured as a gradual process beginning with those language encounters where they can achieve success; that is, Adkins concluded, there must be "relevant teaching of relevant language."

Summary of Research on Idioms

It seems evident that only a little work has been done in the study of idioms--their frequency of occurrence, their effect on reading comprehension, and possible methods of teaching the skill of using them. On the basis of the studies that have been done, however, we can say that idioms occur frequently in school reading materials as early as grade three and that this figurative content increases from each grade to the succeeding level. The evidence further suggests that the idiom is a source of difficulty in reading comprehension both for the native and for the non-native speaker of English and that a direct approach to teaching idioms is both practical and necessary to help overcome this difficulty.

The major related studies have been done by Yandell,

Holmes, Groesbeck, and Adkins. Yandell's study, besides being the first to be done specifically on idioms, is the only one that has provided an instrument through which other populations can be studied.

Chapter 3

MATERIALS AND PROCEDURES OF THE STUDY

The study involved the following steps: (1) selection and preparation of the materials, (2) the selection of the population sample, (3) the administration of the tests, (4) the scoring and processing of the data, and (5) the writing of the report.

MATERIALS OF THE STUDY

The materials of the study included these items:

1. The Gates-MacGinitie Reading Tests, Survey D and Survey E, Form 2, hand scored edition, 1965.
2. Yandell's Idioms Test, accompanying instructions, and an IBM answer sheet for the recording of answers.
3. A classification data sheet on which each child recorded data about himself to make possible his categorization into one of the groups of the study.

The Gates-MacGinitie Reading Tests

The validity and reliability of the Gates-MacGinitie Reading Tests have been established in a nationwide standardization in the United States. Despite the fact that no Canadian norms were available, it was decided that this test should be used because the tests of this series have been used in recent years in Indian Affairs schools and teachers

were accustomed to utilizing its results. Furthermore, the reading test scores were to be used mainly as a basis for finding approximate grade levels for screening purposes and not essentially as a basis for judging the reading ability of the groups. Copies of Survey D and Survey E of the Gates-MacGinitie Reading Test are contained in Appendix A.

Yandell's Idioms Test

The test of idioms used in this study was developed by Maurine Yandell (1959) for her master's study at the University of New Mexico. The test is used in this study with the permission of the director of the Yandell thesis, Miles V. Zintz.

The Idioms Test prepared by Yandell included in its items idiomatic expressions taken from the fourth, fifth, and sixth-grade level readers of three widely used basal readers. Ninety items were chosen, thirty from each of the grade levels indicated, and a multiple choice test of meanings developed using the ninety idiomatic expressions chosen.

The validity of the Idioms Test was investigated through the administration of the test to a group of thirty-three college students enrolled in a professional educational class in the teaching of reading at the University of New Mexico. Their agreement on the answers established with considerable confidence the validity of the test. The reliability of the test was found by using the split-half

method and the Pearson product-moment coefficient of correlation. Reliability by the split-half method was found for each of the four groups of the study and ranged from a low of .75 to .92, with all correlations significant at the .01 level of confidence.

To ensure that the administration of the test would be as uniform as possible, a set of instructions was devised to be read in conjunction with the directions on the cover sheet. Though the test itself was reproduced in its original format, the directions were modified to accommodate a different method of recording answers--a separate answer sheet. The answer sheet used for recording answers to the Idioms Test was an IBM 529.

The Idioms Test was reproduced for this study by the Queen's Printer, Saskatoon. Appendix B contains a copy of the Idioms Test, instructions for administering the test, the IBM answer sheet, and the key to the test.

Classification Data Sheet

A form was developed for the collection of data about each pupil tested. Under supervision, each child recorded on the one-page form the information needed to place him in one of the criterion groups. The forms were produced by the Gestetner process. A copy of the data sheet is shown in Appendix C.

THE SAMPLE

Indian and non-Indian children for the study were chosen from uni-ethnic and multi-ethnic schools in Central and Northern Saskatchewan.

The uni-ethnic schools involved were situated on the Onion Lake and Red Earth Reserves and in Pelican Narrows. These schools were in relatively isolated communities and were considered as "pure" examples of uni-ethnic Indian settings as were obtainable.

The schools with multi-ethnic enrollment were selected from an area where the Indian children from the surrounding reserves still spoke their native language. Specifically, the schools participating were in Rosthern, Duck Lake, and Canwood. At the time of the study, the Indian children were being transported daily by bus from the reserve to the school in town.

The decision was made to include three grade levels to provide a reasonably large data base.

The Idioms Test was administered to 493 children. A total of 28 children was dropped from the study before any analysis of data was done for reasons as noted below. For 12 of the children, no reading test scores were available since they were absent the day the reading test was given. Of the others not included, 9 had incomplete tests, 4 of the children were "trilingual," and the ethnic origin of 3 of the children

was not made clear. The final data included 465 children in the total sample.

To minimize the effect on the Idioms Test results of very high or very low reading ability, a restricted sample was selected from the total sample for further study. In this selected sample were included only those children who obtained a score between the grade levels of 4.0 and 7.9 on the Gates-MacGinitie Reading Tests. Table 3.1 shows the number of students included in each sample.

Table 3.1

Group Distribution of Pupils from Schools
in Central and Northern Saskatchewan
for Total and Selected Samples

Sample	BIU			BIM			BNM			MNM			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Total	51	66	117	43	57	100	58	52	110	64	74	138	216	249	465
Selected	30	36	66	37	45	82	37	33	70	35	29	64	139	143	282

Table 3.1 shows that a total of 183 subjects with very high or very low reading scores was dropped from the total sample.

PROCEDURES

Permission was granted by the Indian Affairs Branch for the tests to be administered during May and June of 1970.

Copies of the Idioms Test were produced in quantity by the Queen's Printer, Saskatoon.

Requests were made, either by telephone or in person, to the superintendents of the school systems to be involved, for permission to do the testing in their schools. In each case this permission was granted and schedules were arranged with the principals and teachers in each school.

In each school, except one, all the tests were administered by the researcher. In Stobart School (Duck Lake), the Gates-MacGinitie Reading Tests had been administered by the teaching staff in May, 1970, and the test results were made available to the researcher.

The procedure in each school was to administer first the Gates-MacGinitie Reading Tests to each class using the instructions given in the manual. The Idioms Test was administered on the following day. For the administration of the Idioms Test, all three items--data sheet, IBM sheet, and a copy of the Idioms Test--were distributed to each student, and the students were directed to fill out the data sheet. Ample time was given for the completion of the sheet and the content of each was scanned by the examiner before the instructions for the test were given. Instructional and sample

exercises for the Idioms Test were used, as written for the purpose by the researcher. Care was taken to use the written instructions in as uniform a procedure as possible from class to class.

Most of the children had had no previous experience with the IBM answer sheets used with the Idioms Test. It was assumed, therefore, that the use of the answer sheets might create some problems and particular care was taken with explanations as to their use. However, the marking of the answers on the IBM sheets seemed to present no difficulties to the children. Since there was no time limit established for completion of the test, there was ample time for the children to adjust to the new situation.

The Gates-MacGinitie Reading Tests were hand scored by the researcher. The scoring of the Idioms Test answer sheets was done at the Computer Centre of the University of Saskatchewan.

ANALYSIS OF DATA

Data obtained from the test results were processed at the Computer Centre of the University of Saskatchewan. Means, standard deviations, and variances were obtained for the total sample, for the selected sample, and for the males and females separately in both total and selected samples. Differences between means for groups in total and selected

samples were calculated and then tested for statistical significance by an analysis of variance. To determine statistically how the groups differed, the Newman-Keuls procedure for testing differences between all pairs of means was used.

Chapter 4

ANALYSIS OF DATA

This chapter is concerned with the analysis of the data obtained from administering the Idioms Test to specific groups of children in grades five, six, and seven in selected schools of Northern and Central Saskatchewan. For this purpose the chapter is divided into four sections.

The first section describes the sources of data for the study--population, total sample, and selected sample. The second section describes the analysis of data to study the significance of the differences between Idioms Test mean scores for the groups within the total sample. The third section describes the analysis of the data for the groups within the selected sample. In the fourth section, the results of the present study are compared with the results of the Yandell Study. A summary statement is included at the end of the chapter.

SOURCES OF DATA

Population

The population (N=493) included biligual Indian children and bilingual and monolingual non-Indian children in selected school settings--both uni-ethnic and multi-ethnic--of Central and Northern Saskatchewan.

Bilingualism for the Indian children involved an English-Cree combination while for the non-Indian children bilingualism included English and one other European language.

The analysis of the data was done in two stages. First, a "total sample" of all children tested was identified and then a "selected sample" was identified from within the total sample.

Total Sample

The total sample included all the children who had written the Idioms Test and for whom scores on the Gates-MacGinitie Reading Tests were available. Children who were trilingual or whose ethnic origin was obscure were eliminated in determining the total sample. This resulted in a total sample of 465 children. Within this total sample four groups, on the basis of linguistic background and school setting, were designated as follows: (1) Bilingual Indian children being educated in a uni-ethnic school setting (BIU--N=117); (2) Bilingual Indian children being educated in a multi-ethnic school setting (BIM--N=100); (3) Bilingual non-Indian children being educated in a multi-ethnic school setting (BNM--N=110); and (4) Monolingual non-Indian children being educated in a multi-ethnic school setting (MNM--N=138). Thus the two groups of Indian children--both bilingual--differed only in school setting, while the non-Indian groups--both attending multi-ethnic schools--were different only in linguistic background.

Selected Sample

In order to follow the plan of the study and to meet the suggestions of Yandell, a selected sample was identified from within the total sample. Yandell had noted that if a child could not cope with the readability of the Idioms Test, he could scarcely be expected to cope with the task of interpreting idioms. With this in mind, only those children who had obtained average scores within the range of 4.0 to 7.9 on the Gates-MacGinitie Reading Tests were included in the selected sample. This second stage of the analysis, it was felt, would minimize the effects on the Idioms Test results of generally very high or very low reading ability. By holding to the specified limits, 183 subjects were dropped because of very high or very low reading scores leaving a selected sample of 282 children. Subjects in the selected sample were distributed among the four groups as follows:

(1) BIU--N=66; (2) BIM--N=82; (3) BNM--N=70; and (4) MNM--N=64.

The distribution of reading test scores appears in Table 4.1. Table 4.1 shows that the groups most affected by the selection procedures were the BIU and the MNM--the BIU because of low scores and the MNM because of high scores. The BIU had 48 subjects (41.0 percent) excluded because of low reading scores but only 3 (2.6 percent) because of high reading scores. Within the BIM group, the group least affected by the screening process, 13 subjects (13 percent) scored below the 4.0 level and 5 (5 percent) above the 7.9 grade level on

the reading test. The BNM had 8 subjects (7.3 percent) scoring below the 4.0 level but 32 (29.1 percent) above the 7.9 grade level. The MNM had only 2 subjects (1.5 percent) scoring below the 4.0 level but 72 (52.5 percent) scoring above the 7.9 grade level.

Table 4.1

Distribution of Gates-MacGinitie Reading Test Scores
for Total Group Showing Selected Sample

Group	Below 4.0		Between 4.0 and 7.9*		Above 7.9		Subtotal		Total
	M	F	M	F	M	F	M	F	
BIU	20	28	30	36	1	2	51	66	117
BIM	6	7	37	45	0	5	43	57	100
BNM	6	2	37	33	15	17	58	52	110
MNM	1	1	35	29	28	44	64	74	138
Total	33	38	139	143	44	68	216	249	465

*Selected Sample

COMPARISON OF GROUPS IN TOTAL SAMPLE ON IDIOMS TEST

The data were analyzed to study the significance of the differences between the groups of the total sample on Idioms Test mean scores. The first part of this section makes comparisons between whole groups while the next part studies

the significance of the differences between males and females of the groups.

Group Comparisons

Means and standard deviations. Table 4.2 shows the observed cell means and standard deviations for all four groups of the total sample. The means ranged from 62.37 for monolingual non-Indian children to 33.01 for Indian children educated in a uni-ethnic setting. Indian children in multi-ethnic schools attained a mean score of 43.20 while bilingual non-Indian children attained a mean score of 55.83.

Table 4.2

Means and Standard Deviations of Raw Scores on Idioms Test
for Groups Within Total Sample

Group	N	Mean	Standard Deviation	Range
BIU	117	33.01	15.20	5-68
BIM	100	43.20	14.34	14-81
BNM	110	55.83	14.48	18-78
MNM	138	62.37	12.14	23-83

Analysis of variance. The data were subjected to an analysis of variance which is shown in Table 4.3. An examination of the data in Table 4.3 shows that the F-ratio, 107.40, exceeds the critical value of 3.78 well beyond the .01 level of confidence. Therefore, to determine statistically how the groups differed, the Newman-Keuls procedure for testing differences between all pairs of means was used. The tests on the means are shown in Table 4.4 on page 62.

Table 4.3

Analysis of Variance for Groups
of Total Sample on Idioms Test

Sources of Variation	Sums of Squares	Degrees of Freedom	Mean-Squares	F-ratio
Groups	.6300	3	21011.00	107.40**
Error	.902	461	195.63	

**F._{.99}(3,461)=3.78

Newman-Keuls test. In Table 4.4 the means of the groups have been arranged in order of increasing magnitude from left to right. The ordered means in ascending order are: (1) BIU, (2) BIM, (3) BNM, and (4) MNM. The first section in the table shows the difference between all possible pairs of means, the second section shows the critical values for a .01-level test, while the third section

shows the critical values for a .01-level test on the difference between pairs of means. A summary of the tests is given in the fourth section.

Table 4.4

Tests on Means of Idioms Test Scores
for Groups Within Total Sample

			1	2	3	4
Groups			33.01	43.20	55.83	62.37
(i)	1	BIU	33.01	—	10.10	29.36
	2	BIM	43.20	—	12.63	19.17
	3	BNM	55.83		—	6.54
	4	MNM	62.37			—
			r = 2			
(ii)		q.99(r,461)		3.64	4.12	4.40
(iii)		$\sqrt{\text{MS error}/n}$ q.99(r,461)		4.75	5.38	5.74
			1	2	3	4
(iv)	1	BIU		**	**	**
	2	BIM			**	**
	3	BNM				**
	4	MNM				

**Significant at .01 level

The summary section of Table 4.4 indicates that there were statistically significant differences between the means

of each of the groups for the total sample. Thus, each group differed from all others in their knowledge of idioms, with the order of achievement from high to low as follows: MNM, BNM, BIM, and BIU.

The analysis shows that Indian children scored lower than non-Indian children and that bilinguals scored lower than monolinguals. Furthermore, Indian children in a multi-ethnic setting scored significantly higher than Indian children in a uni-ethnic setting.

Analysis of Sex Differences

The data were analyzed to study possible differences between mean scores of males and females within the total sample.

Means and standard deviations. Table 4.5 shows the observed cell means and standard deviations for males and females. In each group, females scored higher on the Idioms Test than did males with the least difference between BIU males and females.

Table 4.5

Means and Standard Deviations of Raw Scores
on Idioms Test for Males and Females
in Groups Within Total Sample

Group		N	Mean	Standard Deviation	Range
BIU	M	51	32.12	13.80	8-68
	F	66	33.70	16.28	5-67
BIM	M	43	40.79	12.78	17-65
	F	57	45.02	15.27	14-81
BNM	M	58	53.05	15.51	24-78
	F	52	58.92	12.66	18-78
MNM	M	64	60.33	12.69	23-81
	F	74	64.14	11.43	25-83

Analysis of variance. The data were tested by an analysis of variance. The result of the analysis is recorded in Table 4.6. The F-ratio, 48.08, as revealed in Table 4.6 exceeds the critical value of 2.64 well beyond the .01 level of confidence. Therefore, differences between all possible pairs of means were tested by the Newman-Keuls procedure to determine statistically how males and females differed in their mean scores on the Idioms Test. The results of this test are shown in Table 4.7 on page 65.

Table 4.6

Analysis of Variance for Males and Females
in Groups of Total Sample on Idioms Test

Source of Variation	Sums of Squares	Degrees of Freedom	Mean-Squares	F-ratio
Groups	.650	7	9283.57	48.08**
Error	.882	457	193.07	

** $F_{.99}(7,457)=2.64$

Newman-Keuls test. The tests on the means for the males and females of the total sample are presented in Table 4.7. In ascending order the ordered means are as follows: (1) BIU males, (2) BIU females, (3) BIM males, (4) BIM females, (5) BNM males, (6) BNM females, (7) MNM males, and (8) MNM females. A summary of the tests showing statistically significant differences is given in part four of Table 4.7.

In each of the sections following, a matrix table is included presenting the significant differences pertinent to each section.

Comparison of male/female achievement within groups.

Table 4.8 shows only one significant within-group difference--between BNM males and females. BNM females achieved significantly better (at the .05 level of confidence) than BNM males

Table 4.7

Tests on Means of Idioms Test Scores for Males and Females
in Groups of Total Sample

Groups		1	2	3	4	5	6	7	8
Means		32.12	33.70	40.79	45.02	53.05	58.92	60.33	64.14
(i)	BIU-m	32.12	1.58	8.67	12.90	20.93	26.81	28.21	32.02
	BIU-f	33.70		7.09	11.32	19.36	25.23	26.63	30.44
	BIM-m	40.79			4.23	12.26	18.13	19.54	23.34
	BIM-f	45.02				8.03	13.91	15.31	19.12
	BNM-m	53.05					5.87	7.28	11.08
	BNM-f	58.92						1.41	5.21
	MNM-m	60.33							3.81
	MNM-f	64.14							
(ii) $\sqrt{MS \text{ error}/n=1.846}$		$r = 2$							
q.99(r,457)			3.64	4.12	4.40	4.60	4.76	4.88	4.99
(iii) $\sqrt{MS \text{ error}/n}$									
q.99(r,457)			6.71	7.60	8.14	8.49	8.79	9.01	9.21
		1	2	3	4	5	6	7	8
(iv)	BIU-m			**	**	**	**	**	**
	BIU-f			**	**	**	**	**	**
	BIM-m					**	**	**	**
	BIM-f					**	**	**	**
	BNM-m						*	*	**
	BNM-f								
	MNM-m								
	MNM-f								

* Significant at .05 level

**Significant at .01 level

while in the other groups males and females achieved equally well on the Idioms Test.

Table 4.8
Comparison of Male/Female Achievement
Within Groups for Total Sample

Group Means	BIU-f	BIM-f	BNM-f	MNM-f
BIU-m 32.12	---			
BIM-m 40.79		---		
BNM-m 53.05			..*	
MNM-m 60.33				---

*Significant at .05 level

Comparison of male achievement between groups and female achievement between groups. The data were analyzed to study differences in male achievement between groups. The results of this analysis shown in Table 4.9 reveal that differences in male achievement between groups followed the same trend as the differences between whole groups. That is, the males in each group differed from the males in all other groups in their knowledge of idioms.

Table 4.9
Comparison of Male Achievement Between
Groups for Total Sample

Group Means	BIM 40.79	BNM 53.05	MNM 60.33
BIU 32.12	**	**	**
BIM 40.79		**	**
BNM 53.05			*

* Significant at .05 level

**Significant at .01 level

The analysis of the data to study the differences in female achievement is given in Table 4.10. The trend of the whole group differences and male between-group differences held for the females. However, unlike the male between-group differences, the difference favoring MNM females over BNM females did not reach the accepted level of significance.

Table 4.10
Comparison of Female Achievement Between
Groups for Total Sample

Group Means	BIM 45.02	BNM 58.92	MNM 64.14
BIU 33.70	**	**	**
BIM 45.02		**	**
BNM 58.92			

**Significant at .01 level

Comparison of male/female achievement between groups.

As shown in Table 4.11, the trend in analysis of male/female differences between groups reflected generally the trend found in the basic analysis between whole groups. However, in contrast to the whole-group differences, the difference here favoring MNM males over BNM females was not significant.

Table 4.11
Male/Female Differences Between Groups
for Total Sample

Group Means	BIM-m	BIM-f	BNM-m	BNM-f	MNM-m	MNM-f
	40.79	45.02	53.05	58.92	60.33	64.14
BIU-m 23.12		**		**		**
BIU-f 33.70	**		**		**	
BIM-m 40.79				**		**
BIM-f 45.02			**		**	
BNM-m 53.05						**
BNM-f 58.92					--	

**Significant at .01 level

COMPARISON OF GROUPS IN SELECTED SAMPLE ON IDIOMS TEST

To minimize the effect on the Idioms Test results of very high or very low reading ability, a restricted sample was selected from within the total sample for further study. The selected sample included only those children whose scores fell into the 4.0 to 7.9 grade level range on the Gates-MacGinitie Reading Tests given just prior to the Idioms Test.

Group Comparisons

Means and standard deviations. The observed cell means and standard deviations for the selected sample are shown in Table 4.12.

Table 4.12

Means and Standard Deviations of Raw Scores
for Groups within Selected Sample

Group	N	Mean	Standard Deviation	Range
BIU	66	39.62	12.65	11-67
BIM	82	44.88	11.87	20-67
BNM	70	53.51	11.84	30-78
MNM	64	55.42	10.63	27-77

Table 4.12 shows that the order of achievement from high to low was the same as the order of achievement for the total sample and was as follows: MNM, BNM, BIM, and BIU. As might be expected, there was a slight levelling off of scores as compared with the total sample (see Table 4.2, page 60). The tendency was for an increase in the mean scores of BIU and a decrease in the mean scores of MNM while the scores of the middle groups, BIM and BNM, changed little.

Analysis of variance. The data were tested by an analysis of variance and a summary of the analysis has been recorded in Table 4.13.

Table 4.13
Analysis of Variance for Groups of
Selected Sample on Idioms Test

Source of Variation	Sums of Squares	Degrees of Freedom	Mean-Squares	F-ratio
Groups	.111	3	3692.31	26.58**
Error	.386	278	138.92	

** $F_{.99}(3, 278) = 3.78$

The information in the table of the analysis of variance reveals that the F-ratio of 26.58 exceeded the critical value of 3.78 thus attaining statistical significance well beyond the .01 level of confidence. Therefore, differences between all possible pairs of means were tested by the Newman-Keuls procedure to determine statistically how the groups differed. The tests on the means are shown in Table 4.14 on page 73.

Table 4.14

Tests on Means of Idioms Test Scores
for Groups within Selected Sample

Groups		1	2	3	4	
Means		39.62	44.88	53.51	55.42	
(i)	BIU	39.62	---	5.26	13.89	15.80
	BIM	44.88		---	8.64	10.54
	BNM	53.51			---	1.91
	MNM	55.42				---
(ii) $\sqrt{MS \text{ error}/n} = 1.4102$			$r = 2$	3	4	
q.99(r,278)			3.64	4.12	4.40	
(iii) $\sqrt{MS \text{ error}/n}$		q.99(r,278)	5.13	5.81	6.20	
		1	2	3	4	
(iv)	BIU		**	**	**	
	BIM			**	**	
	BNM				--	
	MNM					

**Significant at .01 level

Neuman-Keuls test. In Table 4.14 the ordered means in ascending order are 1(BIU), 2(BIM), 3(BNM), and 4(MNM). A summary of the tests as given in the fourth section of the table shows that the differences were all statistically significant except in one comparison. The difference of the means between the BNM and MNM groups was not statistically significant. Apparently the bilingual non-Indians and monolingual non-Indians of the selected sample were approximately equal in their ability to interpret idioms.

Analysis of Sex Differences

The data were analyzed to determine differences between males and females within the selected sample.

Means and standard deviations. The observed cell means and standard deviations for males and females in the selected sample are shown in Table 4.15. As in the total sample, in each group females scored higher on the Idioms Test than did males.

Table 4.15

Means and Standard Deviations of Raw Scores
on Idioms Test for Males and Females
in Groups within Selected Sample

Group		N	Mean	Standard Deviation	Range
BIU	M	30	38.03	11.74	19-63
	F	36	40.94	13.38	11-67
BIM	M	37	43.65	11.29	20-65
	F	45	45.89	12.37	21-67
BNM	M	37	50.03	11.77	30-71
	F	33	57.42	10.80	38-78
MNM	M	35	54.63	11.05	27-73
	F	29	56.38	10.22	34-77

Analysis of variance. The data were tested by an analysis of variance recorded in Table 4.16. As shown in Table 4.16 the F-ratio exceeds the critical value beyond the one percent level of confidence. Because of this significant F-ratio, differences between all possible pairs of means were tested by the Newman-Keuls procedure. These tests are presented in Table 4.17 on page 77.

Table 4.16

Analysis of Variance for Males and Females of
Groups of Selected Sample on Idioms Test

Source of Variation	Sums of Squares	Degrees of Freedom	Mean-Squares	F-ratio
Groups	.1233	7	1760.07	12.90**
Error	.374	274	136.41	

**F₉₉(7,274)=2.64

Newman-Keuls test. In Table 4.17 the ordered means are arranged in ascending order as follows: 1(BIU males), 2(BIU females), 3(BIM males), 4(BIM females), 5(BNM males), 7(MNM males), 8(MNM females), and 6 (BNM females). The critical values used in making the tests are shown in the third part while the results of the tests are shown in the fourth part of Table 4.17. A short summary table to show significant differences is included in each section that follows.

Comparison of male/female achievement within groups.

The comparison of male/female achievement within groups is shown in Table 4.18. As in the total sample, the only significant difference is between BNM males and females; that is, BNM females achieved significantly better than BNM males. In the selected sample the significance exceeded the one percent level of confidence.

Table 4.17

Test of Means of Idioms Test Scores for Males
and Females in Groups of Selected Sample

Groups	1	2	3	4	5	7	8	6
Means	38.03	40.94	43.65	45.89	50.03	54.63	56.38	57.42
BIU-m	38.03	2.91	5.62	7.86	11.99	16.60	18.35	19.39
BIU-f	40.94		2.70	4.94	9.08	13.68	15.44	16.48
BIM-m	43.65			2.24	6.38	10.98	12.73	13.78
BIM-f	45.89				4.14	8.74	10.49	11.54
(i) BNM-m	50.03					4.60	6.35	7.40
MNM-m	54.63						1.75	2.80
MNM-f	56.38							1.05
BNM-f	57.42							
(ii) $\sqrt{\text{MS error}/n=1.984}$	$r = 2$	3	4	5	6	7	8	
$q_{99}(r, 274)$		3.64	4.12	4.40	4.60	4.76	4.88	4.99
(iii) $\sqrt{\text{MS error}/n}$								
$q_{99}(r, 274)$		7.22	8.17	8.73	9.12	9.44	9.68	9.90
	1	2	3	4	5	7	8	6
BIU-m				*	**	**	**	**
BIU-f					**	**	**	**
BIM-m						**	**	**
(iv) BIM-f						**	**	**
BNM-m								**
MNM-m								
MNM-f								
BNM-f								

Table 4.18

Comparisons of Male/Female Achievement
Within Groups for Selected Sample

Group Means	BIU-f	BIM-f	BNM-f	MNM-f
	40.94	45.89	56.38	57.42
BIU-m 38.03	---			
BIM-m 43.65		---		
BNM-m 50.03			**	
MNM-m 54.63				---

**Significant at .01 level

Comparison of male achievement between groups and female achievement between groups. Results of an analysis to study differences in male achievement between groups are shown in Table 4.19. Table 4.19 shows that there were no significant differences between males in "adjacent" groups (BIU is adjacent to BIM). There were, however, statistically significant differences found between the groups in three of the comparisons: between BIU and BNM in favor of BNM, between BIU and MNM in favor of MNM, and between BIM and MNM in favor of MNM. Apparently, bilingual Indian males scored equally well in multi-ethnic and uni-ethnic settings. Indian males in a multi-ethnic school, scored lower than monolingual

non-Indian males though equally well with bilingual non-Indian males.

Table 4.19
Comparison of Male Achievement Between
Groups for Selected Sample

Group Means	BIM 48.65	BNM 50.03	MNM 54.63
BIU 38.02	---	**	**
BIM 43.65		---	**
BNM 50.03			---

**Significant at .01 level

The summary of the data analyzed to determine the differences in female achievement between groups is given in Table 4.20. No significant differences were found between BIU females and BIM females, and, like the total sample, there were no significant differences between BNM females and MNM females. That is, females of the same ethnic group (Indian or non-Indian) in the selected sample scored equally well. Other comparisons followed the same pattern of achievement as whole groups.

Table 4.20
Comparison of Female Achievement Between
Groups for Selected Sample

Group Means	BIM 45.89	BNM 57.42	MNM 56.38
BIU 40.94	---	**	**
BIM 45.89		**	**
BNM 57.42			---

**Significant at .01 level

Comparison of male/female achievement between groups.

A summary of the results obtained when the data were analyzed to determine differences in male/female achievement between groups is shown in Table 4.21. Table 4.21 shows that of the twelve comparisons made--six of adjacent groups and six of non-adjacent groups--eight were significantly different and four were not significantly different.

The four non-significant differences were all between males and females of adjacent groups. Only two significant differences between adjacent groups were found--between BIU males and BIM females, and between BIM males and BNM females. Indian females in a multi-ethnic school scored significantly higher than Indian males in a uni-ethnic school, while bilingual non-Indian females scored significantly higher

than Indian males in a multi-ethnic school.

All six comparisons made between males and females of non-adjacent groups yielded statistically significant differences, the comparison always favoring the non-Indian male or female.

Table 4.21

Male/Female Differences Between
Groups for Selected Sample

Group Means	BIM-m	BIM-f	BNM-m	MNM-m	MNM-f	BNM-f
	43.65	45.89	50.03	54.63	56.38	57.42
BIU-m 38.03		*			**	**
BIU-f 40.94	---		**	**		
BIM-m 43.65					**	**
BIM-f 45.89			---	**		
BNM-m 50.03					---	
MNM-m 54.63						---

* Significant at .05 level

**Significant at .01 level

COMPARISON OF PRESENT STUDY WITH YANDELL STUDY

In making a comparison between the Yandell study and the present study one must take into consideration obvious differences. There is, for example, a difference in time. The data for the Yandell study were gathered a decade before the data of the present study. Furthermore, with over fourteen hundred miles separating them, the two samples are from two different countries, and from areas with distinct climatic and geographical conditions. Cultural differences are inevitable. However, there are enough similarities between the studies to make a comparison worthwhile. The purpose of this section is to compare the Yandell study with the present study.

Testing Instrument

In both studies, the test used to gather the data was Yandell's Idioms Test. This test of ninety multiple choice items, containing idioms from commonly used basal readers, was constructed by Yandell for use in her study.

Population and Setting

Yandell's sample consisted of 516 sixth-grade Indian and non-Indian children from Gallup-McKinley County in New Mexico, while the present study has 465 Indian and non-Indian

children in grades five, six, and seven from Central and Northern Saskatchewan. In both studies four groups were identified. Yandell's sample consisted of two Indian and two non-Indian groups. The two Indian groups were Navajo and Zuni, while the non-Indian groups included a bilingual Spanish-American group and an Anglo group. The sample of the present study also consisted of two Indian groups--Cree children in uni-ethnic schools and Cree children in multi-ethnic schools; and two non-Indian groups--a bilingual group, predominantly of French or German background, and a monolingual group.

The setting for Yandell's study was Gallup-McKinley County in New Mexico some fourteen hundred miles from the location of the present study. It is an area with a low density population which might be categorized as predominantly rural. Likewise, the setting for the present study, in Central and Northern Saskatchewan, could be categorized as distinctly rural with a low density population.

In summary, although there are obvious differences between the Yandell study and the present study, there are enough similarities between test instruments used, settings, number of subjects, and grouping and average grade level of samples to make a comparison possible.

Response to Idioms Test

Table 4.22 shows the observed cell means and standard deviations of the present study and of the study done by Yandell in New Mexico in 1959. The order of achievement as shown in Table 4.22 was similar for both samples; that is, non-Indians scored higher than Indians and monolinguals scored higher than bilingual non-Indians. The total means for the groups in the present study was 49.53 and for Yandell's study was 44.45--a difference of 5.08. There is a difference of 4.14 between the combined means of the BIU and BIM and the combined means of the Navajo and Zuni in favor of the Indians of the present study. The greatest difference in mean scores occurred between the bilingual non-Indian groups in the two studies--a difference of 9.50 favoring the bilingual non-Indians of the present study. The means of the MNM and Anglo groups differed by only 1.51 in favor of the Anglos of the Yandell study.

Table 4.22

A Comparison of Idioms Test Results
of Present Study and Yandell Study

Present Study				Yandell Study			
Group	N	Mean	Standard Deviation	Group	N	Mean	Standard Deviation
BIU	117	33.01	15.20	Navajo	224	31.23	13.12
BIM	100	43.20	14.34	Zuni	52	37.38	15.27
BNM	110	55.83	14.48	Spanish American	76	46.33	15.25
MNM	138	62.37	12.14	Anglo	164	63.88	13.62

Response to Test Items

The response to test items was analyzed simply on the basis of percentage of correct responses to each test item by each group in the two samples (see Appendix D). It was assumed that, for each group, the item with the highest percentage of correct responses could be considered the item of least difficulty for the group. Similarly, the item with the lowest percentage of correct responses was assumed to be the most difficult. Thus the percentage of correct responses to each item was ranked from high to low for each group. The twenty least difficult items ("easy" items) and the twenty most difficult items ("difficult" items) were identified for each of the groups within the two samples. The number of items considered--twenty in each category--was

an arbitrary choice but considered an appropriate number for a comparison of this type. Twenty items represented slightly more than twenty percent of the ninety test items.

A comparison was made of the items, regardless of rank or percentage correct, considered easy or difficult by the groups. The comparison does not indicate, for example, that item seven ranked eighth for the MNM and received 86 percent correct response while the same item ranked ninth for the BIU and received 56 percent correct response; item seven is merely listed among the easy items.

Least difficult items. Table 4.23 shows for each group the twenty test items that received the largest number of correct responses. Five of the test items were easy items for all 8 groups, four of the items were common to 7 of the groups, while five of the items were common to 6 of the groups.

Indian groups in the Yandell study had fifteen items in common--that is, of the twenty items identified for each as easy items, fifteen were the same--while Indian groups in the present study had only twelve items in common. All Indian groups in both samples had nine items in common. Non-Indian groups in the Yandell study had fifteen items in common while non-Indian groups in the present study had sixteen items in common. All non-Indian groups had thirteen items in common. All groups in the Yandell study had nine items in common while all groups in the present study had

Table 4.23

Twenty Least Difficult Items for Groups
in Present Study and Yandell Study

Item No.	Idiom	Present Study				Yandell Study			
		BIU	BIM	BNM	MNM	NN	Z	SA	A
4	saved by a hair	x	x	x	x	x	x	x	x
12	a sight of hauling	x	x	x	x	x	x	x	x
21	it's all set	x	x	x	x	x	x	x	x
34	those were the days	x	x	x	x	x	x	x	x
87	all eyes were on her	x	x	x	x	x	x	x	x
1	saved by a hair		x	x	x	x	x	x	x
68	give you a lift	x	x	x	x		x	x	x
77	headed for	x	x		x	x	x	x	x
85	skip it	x	x	x	x	x	x	x	
7	warm spot in her heart	x	x	x	x			x	x
24	in the orange belt			x	x	x	x	x	x
27	took to his heels	x		x	x		x	x	x
32	keep your hands to yourself		x	x		x	x	x	x
51	sheets of rain	x	x	x		x	x		x
22	give him for good		x	x	x			x	x
43	began to dawn upon them	x	x			x	x	x	
19	blazed a trail	x				x	x		x
74	work like a steer			x	x			x	x
84	badly spoiled			x	x			x	x
26	killing the goose that laid the golden egg	x	x			x			
28	thanks for the tip	x	x			x			
49	to start the judges off on the right track		x		x		x		
72	sat bolt upright			x	x				x

Table 4.23 (continued)

Item No.	Idiom	Present Study				Yandell Study			
		BIU	BIM	BNM	MNM	N	Z	SA	A
76	a tall tale		x			x	x		
3	tired enough to drop in his tracks			x	x				
11	cabins will begin to climb the hill	x						x	
15	don't bite my head off			x				x	
29	got cold feet						x	x	
35	from the ground up					x	x		
55	greased lightning	x				x			
56	cut the herd		x						x
75	from pillar to post	x				x			
83	too big for his breeches				x				x
2	rooted to the spot		x						
6	jack-of-all-trades					x			
20	heavy at heart	x							
58	as stubborn as a mule	x							
67	burned our bridges behind us						x		
86	call it a day			x					
90	with a price put upon his head				x				

Table 4.24
 Number of Easy Items Out of Twenty
 That Groups Had in Common

	BIU	Zuni	BIM	Spanish American	BNM	Anglo	MNM
Navajo	14	15	14	11	10	11	9
BIU		12	13	12	10	11	10
Zuni			14	14	12	13	12
BIM				12	12	13	12
Spanish American					16	15	15
BNM						16	16
Anglo							16

eight of the items in common. Five items were common to all groups in both samples.

Table 4.24 shows the number of easy items out of twenty that each group had in common with each other group. The greatest similarity of response was among the non-Indian groups--those who had the highest scores on the Idioms Test. Generally, Indian groups had more items in common (70 percent or more) with other Indian groups than with non-Indian groups, particularly the following combinations: Navajo-BIU, Navajo-Zuni, Navajo-BIM, and BIM-Zuni. The Zuni also had 70 percent of the items in common with the Spanish-American groups. The least number of items in common--nine--was between Navajo and MNM, the groups with the lowest and second-highest scores respectively on the Idioms Test.

Most difficult items. The twenty test items that received the least number of correct responses for each group are shown in Table 4.25. Four of the test items were difficult items for all 8 groups, five of the items were common to 7 of the groups, while three of the items were common to 6 of the groups.

Of the twenty items in the Idioms Test with which each group had the most difficulty, Indian groups in the Yandell study had eleven items in common as did the Indian groups in the present study. All Indian groups in both samples had six items in common. Non-Indian groups in the

Table 4.25

Twenty Most Difficult Test Items for Groups
in Present Study and Yandell Study

Item No.	Idiom	Present Study				Yandell Study			
		BIU	BIM	BNM	MNM	N	Z	SA	A
13	to bring home the bacon	x	x	x	x	x	x	x	x
16	staking a claim	x	x	x	x	x	x	x	x
40	worth his weight in gold	x	x	x	x	x	x	x	x
60	blind flying	x	x	x	x	x	x	x	x
31	bringing home to roost	x	x	x	x	x	x		x
37	Sunday-go-to-meeting attire	x	x	x	x		x	x	x
62	I'm getting on	x	x	x	x	x		x	x
63	blood's thicker than any bank roll	x	x	x	x	x		x	x
89	a skeleton crew	x	x	x	x		x	x	x
14	piece out the supper		x	x	x	x		x	x
73	he who steals a good name is not made richer	x	x	x	x	x		x	
88	she's coming around now	x	x	x		x	x	x	
41	gave him his walking papers	x				x	x	x	x
46	lost some of its edge			x	x		x	x	x
66	a pleasant glow of anticipation		x	x	x			x	x
53	with a sweep of his arm				x		x	x	x
82	shedding crocodile tears		x	x	x				x
8	my mouth is watering	x		x	x				
9	worth his salt				x	x			x
36	monkeyshines		x			x	x		
44	pulling itself out by the bootstraps	x				x	x		

Table 4.25 (continued)

Item No.	Idiom	Present Study				Yandell Study			
		BIU	BIM	BNM	MNM	N	Z	SA	A
45	go to the dogs	x				x	x		
48	chip off the old block		x	x	x				
57	Pike's Peak or bust	x				x	x		
61	to pull stakes			x				x	x
79	mooning around		x	x	x				
5	keep your head about you		x					x	
30	let the cat out of the bag					x		x	
50	turned the tables						x	x	
59	started in a beeline	x				x			
75	from pillar to post				x				x
15	don't bite my head off	x							
17	panning out						x		
23	travel on the magic carpet of printed words							x	
25	on everybody's tongue						x		
33	suit me to a T		x						
38	the laughing stock			x					
42	get it for a song	x							
52	empty as a gourd						x		
54	actions speak louder than words								x
71	got a touch of sun								x
78	yanked up		x						
81	shattered the stillness					x			
83	too big for his breeches	x							
84	badly spoiled						x		
86	call it a day					x			

Table 4.26

Number of Difficult Items Out of Twenty
That Groups Had in Common

	BIU	Zuni	BIM	Spanish American	BNM	Anglo	MNM
Navajo	14	11	11	10	10	9	10
BIU		12	11	11	11	10	10
Zuni			9	11	9	10	9
BIM				13	16	12	15
Spanish American					14	14	13
BNM						14	17
Anglo							16

Yandell study had fourteen of the items in common while non-Indian groups in the present study had seventeen items in common. All non-Indian groups in both samples had eleven items in common. All groups in the Yandell study had five of their twenty difficult items in common while all groups in the present study had ten items in common. Four of the items were common to all groups in both samples.

The number of difficult items out of twenty that each group had in common with each other group appears in Table 4.26. As with the easy items, the greatest similarities of responses occurred between highest scoring groups, though Navajo and BIU had fourteen of the same difficult items, and BIM had sixteen in common with BNM and fifteen in common with MNM. The two groups sharing the greatest number of items, seventeen, were BNM and MNM.

Specific items. Two idioms, "my mouth is watering," and "chip off the old block" were troublesome for three of the four groups of the present study but were not included among the twenty difficult items for any of Yandell's groups. On the other hand, "gave him his walking papers" was included in the twenty difficult items for all groups in the Yandell study but only for BIU in the present study. For three of the Indian groups in the studies, "monkeyshines," "pulling itself out by the bootstraps," "go to the dogs," and

"Pike's Peak or bust," were numbered among their difficult items but were not included in the difficult items for non-Indian groups.

"Blazed a trail" was one of the easy items for three of the groups in the Yandell study, while "work like a steer," and "badly spoiled" were easy items for non-Indians in both samples but not easy items for Indian groups in either sample.

Easy items common to all groups were "mark my words," "a sight of hauling," "it's all set," "those were the days," and "all eyes were on her;" while the difficult items for all groups were "to bring home the bacon," "staking a claim," "worth his weight in gold," and "blind flying."

SUMMARY STATEMENT

The data obtained from the administering of the Idioms Test to selected groups of Indian and non-Indian children have been presented in this chapter. Statistics to determine how the groups differed have been calculated and discussed. In addition, the data have been compared with some of the results of the Yandell study. The findings and conclusions will be presented in the final chapter.

Chapter 5

FINDINGS, CONCLUSIONS, AND IMPLICATIONS

The purpose of the study was to compare the performance of four groups of children--two Indian and two non-Indian groups--on a test of commonly used idioms.

The data were analyzed first to study mean differences between groups of a total sample of 465 children from six schools in Northern and Central Saskatchewan. The same sample was also examined for possible sex differences in achievement.

In a second analysis a selected sample of 282 was identified from the total sample by excluding all subjects who scored below the 4.0 grade level or above the 7.9 grade level on the Gates-MacGinitie Reading Tests given prior to the Idioms Test. This sample was also studied for possible sex differences in achievement.

Groups within both samples were designated as follows:

(1) BIU--Bilingual Indian children in uni-ethnic school setting, (2) BIM--Bilingual Indian children in a multi-ethnic school setting, (3) BNM--Bilingual Non-Indian children in a multi-ethnic school setting, and (4) MNM--Monolingual Non-Indian children in a multi-ethnic school setting.

A comparison was also made between the findings of the present study and the Yandell study done in New Mexico.

SUMMARY OF FINDINGS

Total Sample

For the total sample, findings were as follows:

1. The order of achievement on the Idioms Test from high to low was as follows: MNM, BNM, BIM, and BIU. All differences between groups were statistically significant.

2. Although all within-group sex differences consistently favored the females, the differences were not statistically significant, except in the bilingual non-Indian group.

3. When the males were compared between groups the trend in differences was the same as the trend between whole groups. Likewise, when females were compared between groups, differences were significant between females of adjacent groups (in the order of MNM, BNM, BIM, and BIU) with one exception. The difference between BNM females and MNM females was not significant.

4. When male/female achievement was compared between groups, trends were generally the same as for whole-group differences with one exception; there was no significant difference between MNM males and BNM females.

Selected Sample

For the selected sample, findings were as follows:

1. The order of achievement on the Idioms Test from high to low was the same as for total sample groups which was:

MNM, BNM, BIM, and BIU. However, the difference between BNM and MNM groups was not statistically significant.

2. Within-group sex differences were significant only between BNM males and BNM females, that is, between bilingual non-Indian males and females.

3. When males were compared between groups there were no significant differences between males in adjacent groups. There were, however, statistically significant differences between males in non-adjacent groups, the differences being consistently in favor of non-Indian males. When females were compared between groups, no significant differences were found between Indian females (BIU and BIM) or between non-Indian females (BNM and MNM). Significant differences consistently favored non-Indian females over Indian females.

4. When male/female achievement between groups was compared, the differences between adjacent groups were not significant except for the differences between BIU males and BIM females and between BIM males and BNM females. The differences between these groups were statistically significant and favored the females. Differences between non-adjacent groups were consistently significant with differences favoring the non-Indian male or female.

COMPARISON OF FINDINGS IN PRESENT STUDY WITH FINDINGS OF YANDELL STUDY

When the two studies were compared, findings were as follows:

1. There were some similarities between groups of the Yandell study and the present study in their knowledge of the idioms in the Idioms Test. In both studies non-Indians scored higher than Indians, and monolinguals scored higher than bilinguals.

2. When comparisons were made as to what idioms in the Idioms Test each group found easy, the greatest similarities were between BNM and MNM, BNM, and Anglo, and Spanish-American and BNM. When difficult items were compared, the greatest similarities appeared between Anglo and MNM, BNM and MNM, and BIM and BNM.

CONCLUSIONS

Within the limits of this study, a number of conclusions can be drawn on the basis of the analysis of the Idioms Test scores.

1. Non-Indian children, whether bilingual or monolingual, appeared to achieve significantly better than Indian children in either multi-ethnic or uni-ethnic settings.

2. Indian children in a multi-ethnic setting achieved better than Indian children in a uni-ethnic setting.

3. Monolingual non-Indian children scored higher than bilingual non-Indian children. However, for the selected sample, the differences were not statistically significant.

4. For the total and selected samples, there seemed to be few sex differences of importance. Between-group differences generally reflected the trend for the whole-group analyses, while within-group differences were not significant except for the bilingual non-Indian group of the selected sample. Within this group the difference favoring the females reached statistical significance at the .05 level for the total sample and the .01 level for the selected sample. In the selected sample, bilingual non-Indian females achieved the highest mean score of all--even higher than the monolingual female group. When the selected sample was identified, seventeen (33 percent) of the bilingual non-Indian females were excluded from the total sample because of high reading test scores while forty-four (59 percent) of the monolingual non-Indian females were excluded. It is possible that more of the "superior" students were excluded from the monolingual group resulting in a greater lowering of their mean score (64.14-56.38) than the mean score of the bilingual female group (58.92-57.42).

5. A comparison of the Yandell study with the present study on the basis of easy or difficult items has shown similarities in the response to the Idioms Test items by groups

of the studies. The most consistent similarities seemed to be between the groups scoring highest on the Idioms Test. However, there seem to be few consistencies in what could be considered an easy or difficult item. The study does not yield any evidence that would determine why an idiom might be difficult or easy for any particular sample or group. No doubt, some idioms are more abstract than others, that is, there is greater distance between literal meaning and actual (idiomatic) meaning and this may contribute to the difficulty of interpretation. From the results of the study there is reason to believe that this may be true, but it is not consistently true. Furthermore, one cannot discount test item construction as a factor in determining relative difficulty of items. But more than anything else, it is probably the degree of familiarity with an idiom through usage or exposure that determines its difficulty. This would put bilinguals at a disadvantage since their opportunity for exposure to and usage of the language is almost certainly less than that of monolinguals.

LIMITATIONS OF THE STUDY

The conclusions drawn from this study must be interpreted in terms of certain limitations:

1. The linguistic background of the children--part of the data gathered about each child--was obtained from each

subject and from no other source. However, since some time was spent discussing this part of the data sheet with questions solicited from the children to clarify what their response should be, it was considered that the information was reasonably accurate.

2. The conclusions must be interpreted in terms of the test instrument used. Although the same test was used for all, and procedures of administration uniform, there are always possibilities of indefinite or insufficient context in the test items, or ambiguity in the choice of answers provided.

IMPLICATIONS OF THE STUDY

The conclusions of the study suggest certain implications:

1. The study has shown that Indian children do have difficulty with the comprehension of English idioms. Because of the high frequency of idioms in the printed material used in schools, teachers should direct instruction at improving the ability of Indian children to interpret the idioms likely to be encountered in their reading of the texts.

2. The results obtained from the non-Indian groups suggest that many English idioms used in basal readers are not familiar even to monolingual English-speaking children. Thus, specific teaching directed towards the development of

competency with idioms should be provided for all children.

3. A point related to the idea of the need for the teaching of idioms is the question of whether or not publishers should assist teachers by including more practice in manuals and workbooks of the basal series than is already provided. Even a glossary of idioms included in the reader or manual might help to sensitize teachers to this aspect of language and make a contribution towards improving teaching in this area.

4. There remains some element of doubt about the effect of bilingualism on the ability to interpret English idioms when they are encountered in reading. In the total sample, bilinguals scored lower than did monolinguals, but in the selected sample bilingual non-Indian females scored higher than any other group. The effect of bilingualism on the understanding of idioms has not been clarified by this study.

5. The study suggests a need to re-examine methods of determining readability levels of printed material. Although a child may be able to decode individual words with ease--that is, he may be able to assign appropriate dictionary meanings to them--he may misinterpret or completely misunderstand what he is reading if he is unfamiliar with the idiomatic language used.

6. A comparison of the findings of the Yandell study done in New Mexico and the findings of the present study

shows that, generally speaking, there has been little change over the past decade in children's understanding of idioms. Apparently, there has not been the needed emphasis on this facet of language in Saskatchewan.

7. The similarity of response to the items in the Idioms Test by the groups of the Yandell study and the groups of the present study seems to indicate the possibility that there may be a "North American Idiom." How children in other English-speaking countries would score on the same test is a matter of conjecture. It is possible, also, that there are "standard" idioms in English that would be familiar to most English-speaking people, and idioms developed regionally and familiar only to people in the area where they originated.

SUGGESTIONS FOR FURTHER STUDY

There are a number of possibilities for further studies arising out of the present study.

1. An attempt should be made to construct an idioms test on the Yandell model based on basal readers in current use in Canada. This test if developed in two forms would be useful for pretesting and posttesting children's understanding of idioms when a basal approach to reading instruction is used.

2. A study should be done to determine the relationship between children's understanding of the idiom in spoken language and in written language. Heilman and Boyd (see p. 38)

have suggested that there is a difference in the understanding of idioms by children when the idioms are encountered in reading and when they are encountered in "oral communication."

3. An interesting study might be that of identifying the use of figurative language in Cree. Idioms in Cree could be pointed out to Cree-speaking children as a method of sensitizing them to idioms in English.

SELECTED BIBLIOGRAPHY

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A. BOOKS

- Boyd, Gertrude A. Teaching Communication Skills in the Elementary School. Toronto: Van Nostrand Reinhold Company, 1970.
- Dechant, Emerald V. Improving the Teaching of Reading. Englewood Cliffs: Prentice-Hall, Inc., 1964.
- Durkin, Dolores. Teaching Them to Read. Boston: Allyn and Bacon Inc., 1970.
- Halliday, M. A. K., and Angus McInosh (eds.). Patterns of Language: Papers in General, Descriptive, and Applied Linguistics. London: Longman's, 1966.
- Heilman, Arthur W. Principles and Practices of Teaching Reading. Columbus, Ohio: Charles E. Merrill Publishing Company, 1967.
- Jones, W. R. Bilingualism in Welsh Education. Cardiff: University of Wales Press, 1966.
- McMordie, W. (Revised by R. C. Groffin). English Idioms. London: Oxford University Press, 1966.
- Macnamara, John. Bilingualism and Primary Education. Edinburgh: T. & A. Constable Limited, University Press, 1966.
- Mackey, W. F. Bilingualism as a World Problem. Montreal: Harvest House, 1967.
- Partridge, Eric. What's the Meaning. London: Hamish Hamilton, 1963.
- Pei, Mario. How to Learn Language and What Language to Learn. New York: Harper & Row Publishers, 1960.
- Politzer, Robert L. Teaching French: An Introduction to Applied Linguistics. Toronto: Ginn and Company, 1960.
- Smith, Logan Pearsall. Words and Idioms. London: Constable and Company Ltd., 1957.
- Vizetelly, Frank H., and Leander J. de Bekker. A Desk-book of Idioms and Idiomatic Phrases. New York: Grosset and Dunlap Publishers, 1923.

- Wood, Frederick T. English Verbal Idioms. New York: Washington Square Press, Inc., 1967.
- Whitford, Harold C., and Dixon, Robert J. Handbook of American Idioms and Idiomatic Usage. New York: Simon & Schuster, Inc., 1953.
- Zintz, Miles V. Corrective Reading. Dubuque, Iowa: Wm. C. Brown Company, 1966.
- _____. The Reading Process. Dubuque, Iowa: Wm. C. Brown Company Publishers, 1970.

B. PERIODICALS

- Adkins, Patricia G. "Teaching Idioms and Figures of Speech to Non-native Speakers of English," Modern Language Journal, LII (March, 1968), 148-152.
- _____. "Relevancy in Children's Language," The Reading Teacher, XXIV (October, 1970), 7-11.
- Carrow, Sr. M. A. "Linguistic Functioning of Bilingual and Monolingual Children," Journal of Speech and Hearing Disorders, XXII (September, 1957), 371-380.
- Entwisle, Doris R. "Implications of Language Socialization for Reading Models and for Learning to Read," Reading Research Quarterly, VII (Fall, 1971), Newark, Delaware: International Reading Association, 111-167.
- Jensen, J. V. "Effects of Childhood Bilingualism I," Elementary English, XXXIX (February, 1962), 132-143.
- _____. "Effects of Childhood Bilingualism II," Elementary English, XXXIX (April, 1962), 358-366.
- Jowett, W. P. "On Phrasal Verbs," English Language Teaching, V (July, 1951), 152-157.
- Lambert, W. E. and J. Macnamara. "Some Cognitive Consequences of Following a First-grade Curriculum in a Second Language," Journal of Educational Psychology, LX (1969), 86-96.
- Linn, G. B. "Linguistic Functioning of Bilingual Mexican-American Children" Journal of Genetic Psychology, CXI (December, 1967), 183-193.

- Murrell, Martin. "A Note on Idioms," English Language Teaching, XXIII (May, 1969), 258-260.
- Parkinson, Frank C. "English Idiom: the Second Language," English Language Teaching, XXI (May, 1967), 217-221.
- Peal, Elizabeth, and Wallace E. Lambert. "The Relation of Bilingualism to Intelligence," Psychological Monographs: General and Applied, 76:27, 1962.
- Roeming, Robert F. "Bilingualism and the National Interest," Modern Language Journal, LX (February, 1971), 73-81.
- Scott, Charles T. "Literature and the ESL Program," Modern Language Journal, XLVIII (December, 1964), 489.
- Smith, Madorah E. "Measurement of Vocabulary of Young Bilingual Children in Both of the Languages Used," Journal of Genetic Psychology, LXXIV (June, 1949), 305-310.
- Timothy, Sr. M. "The Reading Problem of a Bilingual Child," Elementary English, XLI (March, 1964), 235-237.
- Tireman, L. S. "The Bilingual Child and His Reading Vocabulary," Elementary English, XXXII (January, 1955), 33-35.
- Wingfield, R. J. "English Idioms in a Second Language Teaching Situation," English Language Teaching, XXII (May, 1968), 231-234.

C. PUBLICATIONS OF UNIVERSITIES AND EDUCATIONAL ORGANIZATIONS

- Braun, Carl. "Reading Achievement of Monolingual and Bilingual Children in Relation to Selected Linguistic Variables," Language, Reading, and the Communication Process, ed. Carl Braun. Newark, Delaware: International Reading Association, 1971. Pp. 41-51.
- Ulibarri, Horacio. Interpretive Studies on Bilingual Education: Final Report. Albuquerque, New Mexico: University of New Mexico, 1969.

D. UNPUBLISHED MATERIALS

- Colliou, Rose C. "Gates Reading Survey: A Study of Standardized Reading Test Results of Indian Pupils (1965-66) in the Federal Schools of the Indian Affairs Education Division, Department of Indian Affairs and Northern Development," Ottawa, 1966.
- Condie, Leroy. "An Experiment in Second-language Instruction of Beginning Indian Children in New Mexico Public Schools." Unpublished Doctoral dissertation, The University of New Mexico, 1961.
- Dudding, Christine. "An Investigation into the Bilingual Child's Comprehension of Antonyms." Unpublished Master's thesis, University of New Mexico, 1961.
- Groesbeck, H. G. "The Comprehension of Figurative Language by Elementary Children: A Study in Transfer." Unpublished Doctoral dissertation, The University of Oklahoma, 1961.
- Hess, Stephen Grant. "A Comparative Study of the Understanding Which Bilingual Students Have of the Multiple Meanings of English Words." Unpublished Master's thesis, University of New Mexico, 1963.
- Holmes, Elizabeth A. "Children's Knowledge of Figurative Language." Unpublished Master's thesis, The University of Oklahoma, 1959.
- Mercer, Veta W. "The Efficiency of Bilingual Children in Understanding Analogies in the English Language." Unpublished Master's thesis, University of New Mexico, 1960.
- Talley, Kathryn S. "The Effects of a Program of Special Language Instruction on the Reading and Intellectual Levels of Bilingual Children." Unpublished Doctoral dissertation, University of New Mexico, 1965.
- Yandell, Maurine D. "Some Difficulties Which Indian Children Encounter with Idioms in Reading." Unpublished Master's thesis, University of New Mexico, 1959.

APPENDICES

APPENDIX A

Gates-MacGinitie Reading Tests Survey D and Survey E, Form 2

GATES —
MACGINITIE
READING TESTS

SURVEY D, FORM 2

Speed & Accuracy

Vocabulary

Comprehension



TEACHERS COLLEGE PRESS
TEACHERS COLLEGE
COLUMBIA UNIVERSITY
NEW YORK

To the Teacher:

BE SURE to follow the directions in the Manual (included in each test package) when giving these tests. The directions will tell you how to explain the tests and how to work the sample items with the students. Allow the exact time specified in the Manual.

	SPEED & ACCURACY		VOCABULARY	COMPREHENSION
	Number attempted	Number right		
Raw score				
Standard score				
Percentile score				
Grade score				

(LAST) (FIRST)

date _____ Boy _____ Girl _____
(MONTH, DAY, YEAR)

Testing date _____

Teacher _____

School _____

DIRECTIONS: Read sample paragraph S1. Under it are four words. Find the word that best answers the question.

S1. Mary pulled and tried to turn the knob. She could not turn it. It was a cold day to be locked outside. What was Mary trying to open?

box bag door safe

word **door** is the best answer to the question. Draw a line under the word **door**.

Now read paragraph S2. Find the word below the paragraph that best completes the paragraph, and draw a line under it.

S2. The huge animals walked slowly, swinging their trunks from side to side. They had big floppy ears and long white tusks. These animals were

tigers deer lions elephants

word **elephants** best completes paragraph S2. You should have drawn a line under the word **elephants**.

On the next two pages are more paragraphs like these samples. When you are asked to turn the page, read each paragraph and find the word below it that best answers the question or completes the paragraph. Draw a line under the best word. Mark only *one* word for each paragraph. Do the paragraphs in the order in which they are numbered: 1, 2, 3, etc. If you can't answer a question, go on to the next one. Work as fast as you can without making errors.

Speed and Accuracy

English and French are both official languages in Canada. Many road markers and other signs there are written in both French and

Latin	Canada	English	Chinese
-------	--------	---------	---------

The natives in some tropic areas use coconuts for food and find many uses for the leaves of the nut palm. For them, the coconut palm is

valuable	new	useless	troublesome
----------	-----	---------	-------------

Bobwhites belong to the quail family. Their reddish-brown feathers with speckled markings make them easy to see in the woods. They are

squirrels	fish	birds	trees
-----------	------	-------	-------

One of the most courageous frontiersmen was Daniel Boone. His was a dangerous, adventurous life, and he lived to be eighty-six. His life was

dull	exciting	peaceful	short
------	----------	----------	-------

Most bank vaults are closed by timed combination locks. They will open only at certain times, and the person opening the safe must know the

correction	valuables	answer	combination
------------	-----------	--------	-------------

Some bees are named for their constant work. They make wax and take nectar from flowers. They care for their larvae and clean the hive. These bees are

queens	drones	larvae	workers
--------	--------	--------	---------

The ancient Greeks called Athena the Goddess of Wisdom. Since owls were considered sacred to Athena, Wisdom became associated with

donkeys	oxen	owls	mules
---------	------	------	-------

Most garter snakes are black with lengthwise yellow stripes. The pilot snake is black. Which is the snake with the lengthwise yellow stripes?

garter	skunk	king	pilot
--------	-------	------	-------

Franz Schubert wrote many beautiful songs and symphonies, but while he lived his genius as a composer was not appreciated. This man was a

scribe	poet	soldier	musician
--------	------	---------	----------

28. In Spanish, the word for dog is *perro*, and in French it is *chien*. The word for cat in Spanish is *gato*. What is the French word for dog?

gato	chien	perro	cat
------	-------	-------	-----

29. The capital of the United States is Washington, on the Potomac River. New York, the largest city, is on the Hudson. On what river is Washington?

Capital	James	Potomac	Hudson
---------	-------	---------	--------

30. Many peaches are grown in California, for they require a temperate climate. In what zone would you expect the best production of this fruit?

Frigid	Canal	Torrid	Temperate
--------	-------	--------	-----------

31. Samuel Morse worked many years before he was successful in developing an electric telegraph. He also invented the Morse code. This man was

an inventor	a soldier	a spy	a photographer
-------------	-----------	-------	----------------

32. Polar bears are about as heavy as horses. They swim swiftly, using only their forepaws. One of these animals may weigh about as much as

a dog	a horse	a sheep	an elephant
-------	---------	---------	-------------

33. Sometimes an oasis is found in the sandy desert. Trees, grass, and other plants may grow there. Their presence means that there is

fire	gravel	water	sand
------	--------	-------	------

34. The territory which William Penn acquired for a colony was named Pennsylvania, meaning Penn's Woods. The land was

barren	desert	submerged	forested
--------	--------	-----------	----------

35. The Indians of the Great Plains first hunted on foot. By the eighteenth century they had horses. They could then pursue game more

silently	rapidly	cautiously	friendly
----------	---------	------------	----------

36. As a meteor enters the earth's atmosphere, friction makes it so hot that it glows as it streaks toward the earth. The rushing meteor becomes

fiery	quiet	cold	wet
-------	-------	------	-----

Vocabulary

19. chart

weapon
black
reason
furniture
map

20. murderer

guard
doctor
witch
killer
sugar

21. criticism

insert
judgment
morality
harmony
purity

22. interview

conversation
insight
gap
landscape
internal

23. vehicle

carriage
strength
medicine
portion
gloat

24. stop

buy
look
sign
halt
pin

25. enrage

seize
anger
enter
expand
confine

26. tragic

funny
wild
slippery
dreadful
shaggy

27. doleful

sad
quart
drug
fast
profuse

28. notify

excuse
sue
code
befriend
tell

29. basin

drop
wrong
rope
table
bowl

30. motionless

still
boring
lost
rapid
alone

31. graven

painted
stolen
carved
solemn
sunken

32. flimsy

caprice
quick
fact
cloth
frail

33. splendor

court
bank
glory
picture
land

34. hoist

lift
careen
liquid
garment
build

35. falsehood

raincoat
string
bandit
lie
wet

36. animation

fame
brutality
liveliness
mercy
disgust

37. tropical

silvery
usual
hot
artificial
current

38. ruinous

shrill
thoughtless
fragile
destructive
numerous

39. petition

treason
separate
explode
building
request

40. mutinous

high
noisy
silent
metallic
rebellious

41. sheaves

turtles
bundles
pages
cutters
kindles

42. insatiate

unsatisfied
intolerable
disrespectful
penalize
acquaint

43. commence

begin
traffic
observe
business
country

44. elegance

importance
extravagance
grace
pomposity
kindness

45. desertion

dryness
abundant
coming
leaving
finding

46. uncouth

crude
late
dull
nameless
mysterious

47. authoritative

police
reliable
written
talkative
fanciful

48. compose

decay
pause
devise
propel
equate

49. bountiful

liberal
founded
religious
peaceful
precious

50. embody

butcher
include
proclaim
liberty
embalm

STOP

CHECK YOUR WORK

Comprehension

Before the invention of printing, books were made by hand. This work was tedious and took such a long time that books were very 15. Only the wealthy could afford to buy them. Today books are plentiful. A single machine can print thousands of 16 of a book in short time.

library scarce open pretty large
novels authors expenses publishers copies

Trees and caves were probably man's first shelters. After a long time he learned to make 17 by building a framework of branches and covering it with vines or grass or the 18 of wild animals.

hives shelters stucco boats trees
hairs teeth tracks hides horns

For many years it has been possible to send letters via special delivery." This means that when a letter bearing "special delivery" stamp arrives at the post office to which it is addressed, it is 19 immediately. A 20 takes the letter to the person to whom it is addressed. There is an extra charge for this 21.

delivered tried written held charged
monoplane society typist stamp messenger
certain office service address selection

One of the most useful machines for highway building is the bulldozer. Its large front blade pushes down trees and bushes and 22 debris such as loose rocks and stumps. After the 23 has cleared away the debris, graders and other 24 do their work.

debris builds removes designs returns
surveyor highway forest traffic bulldozer
debris machines roads can engineers

Salmon are fish that spend part of their lives in the ocean. Once every year some of them leave the 25 and travel far up a river to lay their eggs. As the salmon go up the 26, many of them are caught by fishermen.

25. watch sea lake land water
26. ocean trees banks stairs river

Bifocals are glasses which are divided to provide correction of both near and far vision. Each glass has two parts, the lower for close and the upper for 27 viewing. If well fitted, bifocals correct many 28 defects.

27. closer proximity environs distant earshot
28. screening vista hearing facial visual

Roman children once wrote on wax tablets in school. Two or three of these tablets were strung 29 with cords, making a kind of book. The 30 was done with a stylus, a small rod sharpened at one 31.

29. together apart knots seldom thought
30. sewing singing cover writing stealing
31. middle end front back time

Some farmers feed soybeans to their animals. Soybeans are also used in making plaster, buttons, and steering wheels for automobiles. The oil from soybeans is 32 in making paint and ink. A plant with such a 33 of uses is of great 34.

32. timed burned used forged tasted
33. variety limitation paucity color difficulty
34. loss height depth value annoyance

SURVEY E, FORM 2

Vocabulary

To the Teacher:

	SPEED & ACCURACY		VOCABULARY	COMPREHENSION
	Number attempted	Number right		
Raw score				
Standard score				
Percentile score				
Grade score				

10 9 8 7 6 5 4 3

Speed and Accuracy

The names of many sciences end in *logy*, a coming form from the Greek *logos* meaning word or course. Which is the name of a branch of science?

bacterium tektite malacology desiccation

Certain large seaweeds, called kelp, are burned to turn their ashes, which are a good source of iodine. Which source of iodine comes from the

ocean air forests mines

Many Indian tribes made pictographs to record events. A picture of the sun could represent time. An arrow might mean a battle. Pictographs are

weapons clocks symbols cameras

The skunk is generally distrusted because of its odor. It should not be harmed, however, for it eats insects. The skunk ought to be considered very

harmful cowardly useful wrong

Modern vocational schools often work closely with industry. The curriculum is designed to develop special skills that will qualify the students for

college leisure unemployment jobs

Kamloops is a city in British Columbia. It means "meeting of the waters" in Indian. Kamloops is a trading center for farmers. It is named for its

rivers farms forests mountains

Gluten makes dough elastic so it can hold the bubbles of gas that make good, light bread. Grains with high gluten content are good for making

rubber glass light bread

Prehistoric Swiss lake dwellings were built on platforms away from shore. Some had long gangways to the shore, but others were reached by

helicopter horseback boat car

New England's rocky soil turned settlers toward the sea, where they could make a living fishing and farming. Thus, there was rapid development of

leisure shipbuilding plantations mining

28. Names often contain clues to their national origin. Many Welsh names, for example, begin with double L. Where would the name Llanberis come from?

England Ireland Scotland Wales

29. Granite rock was once molten, but it solidified deep in the earth. Uplifting and erosion have, in places, brought it to the surface where it can be

burned quarried eaten plowed

30. The AFL and CIO were two separate labor unions. They disputed over many issues and competed for new members. In 1955 they merged. They decided to

dispute cooperate compete separate

31. Corn and tomatoes were new to European tables when introduced by those returning from the New World. These vegetables came from

America Europe China India

32. Some think that in prehistoric times a strip of land connected Asia to Alaska. This bridge would help account for the migratory movement of

trucks trains animals boats

33. At calving time, a herd of wild elephants may trumpet at night to keep away animals that might harm the calves. At such times, the elephants are

solitary noisy still stampeding

34. The Inca once ruled the people of the Andes. He ruled firmly, assigning work and controlling distribution of goods. The rule of the Inca was

absolute democratic loose weak

35. Herbivores are mammals that eat plants, while carnivores eat flesh, and insectivores eat insects. Minks hunt fish, fowl, and mammals. They are

carnivores preyed omnivores herbivores

36. Man's fingers enable him to perform many delicate tasks. Man could learn something about mechanical efficiency directly from nature by studying

slide rules watches machines hands

Vocabulary

19. obstinacy

seafood
fate
shame
stubbornness
roughness

20. hamper

support
interfere
condemn
injure
offer

21. devastation

hilarious
settlement
destruction
auction
miracle

22. significant

simplify
costly
defiant
important
small

23. knack

skill
carriage
hike
lameness
fortune

24. treachery

collection
sport
deceit
kitchen
trial

25. dilemma

dilate
decision
sermon
rule
problem

26. sonata

poem
cape
music
archway
note

27. tariff

duty
commerce
officer
giant
surface

28. heartfelt

gloomy
hard
sincere
material
illness

29. proficient

provoke
active
friendly
wealthy
able

30. ember

gem
yellow
coal
bending
part

31. cognizance

furtive
simplicity
remarkable
awareness
money

32. competency

honesty
ability
commission
ambition
fairness

33. senile

old
irregular
striated
vigorous
agreeable

34. elusive

swift
shy
gloomy
stingy
baffling

35. facsimile

smile
contract
copy
mask
bond

36. momentum

tower
mineral
hardness
impetus
value

37. warble

stir
pretend
decorate
dance
sing

38. punctilious

precise
repeated
sharp
prejudiced
haughty

39. retaliate

repay
refuse
realize
sell
slide

40. jocular

vein
sportive
sneaky
odd
generous

41. scrutinize

observe
polish
hoard
scrape
construct

42. morose

rugged
swollen
sad
wooded
rotten

43. amnesty

felony
pardon
payment
metal
loss

44. congruent

opposed
perverse
agreeing
courageous
mean

45. iniquitous

firm
unjust
fearless
contented
morbid

46. chagrin

mirth
reward
knight
poverty
disappointment

47. gaunt

speedy
thin
dark
pale
tall

48. cognomen

gear
name
aloud
people
axis

49. heretical

hermit
disagreeing
repetitious
immediate
criminal

50. sporadic

drug
twisted
playful
fragile
scattered

Comprehension

Selective breeding is the attempt to develop the best possible plants and animals. Scientists have worked to 15 the most desirable features into a single 16.

all combine deny use declare
rain battle day house color

Agricultural overproduction is a problem in the United States. Scientists are helping farmers find 17 by using surpluses to make products we need. For example, scientific research has demonstrated that pulp from our surplus cereal grains can be blended with wood pulp in making paper. Such 18 crops can thus be converted into useful products.

methods supplies produce problems solutions
products surplus scarce foreign garden

In 1910 the American ski jumping record was held by Gustav Nordby of Michigan, who jumped 140 feet. In 1960, fifty years later, the 19 was again held by a man from Michigan, but the 20 of the jump was more than 21. In 1960 James Brennan jumped 316 feet.

ski record road sight meeting
kind light length same jumping
doubled trebled doubted before American

There are many kinds of terns, all of them skillful at hunting. They have a swift graceful flight and can swoop down into the 22 to capture their prey. The common tern is a beautiful 23. It was once most often killed off by 24 because of the great demand for its plumes.

fields trees mud water snow
otter plane raccoon place bird
hunters fish hawks disease neglect

The practice of taxing goods entering or leaving an area has a long history. Even in early times many rulers welcomed the opportunity to collect money from foreigners who were transporting goods. Taxes of this sort did not come directly from the ruler's 25 and thus made the 26 seem less demanding to his own people.

25. jewels receivers subjects mint taxes
26. money transportation ruler goods trip

Mother Goose rhymes seem like innocuous jingles, designed only to entertain small children. But many began as political satire, using the nicknames of 27 or court 28 and making fun of their activities.

27. infant political stars rhymes animals
28. gardens yards days personalities buildings

When experience revealed that certain crops diminish desirable soil properties while others help restore these properties to the 29, farmers began to change crops regularly in some fields. This system of 30 crops 31 is known as crop rotation.

29. air cattle soil sea rain
30. killing forcing burning consuming changing
31. regularly forever once production always

The surface of the ocean bed can be mapped accurately and rapidly by using a modern sounding apparatus. Depth is measured by the length of time it takes 32 to travel from the surface to the 33 of the ocean and to be 34 back again.

32. stone sound fish man bullet
33. sides bottom mouth crest waves
34. pulled towed smoothed echoed sold

APPENDIX B

Yandell's Idioms Test with Instructions

Answer Sheet and Key

A READING TEST

prepared by

Maurine Dunn Yandell, Sixth Grade Teacher
Gallup-McKinley County Schools

and

Miles V. Zintz, Director
Indian Research Study
College of Education
The University of New Mexico

DIRECTIONS

Read sample exercise 101. In it are some underlined words. Find the answer that means most nearly the same as the underlined words.

101. "Look out!" he cried. "You're going to bump into that car!"
What does look out mean?

- a. look outside.
- b. ~~Go~~ to the window.
- c. be careful.
- d. drive the car.

Yes, be careful means most nearly the same as look out. The letter in front of it is "c". Now look at your answer sheet. Find the number 101. With your pencil make a black mark in the space below "c".

Now read exercise 102. Find the words below the sentence that mean most nearly the same as the underlined words, and mark the answer on your answer sheet.

102. Keep your eyes peeled as we drive past the park. You might see a deer.

- a. pluck your eyebrows.
- b. watch very carefully.
- c. do not blink.
- d. close your eyes.

The best answer to 102 is watch very carefully. You should have marked "b" for exercise 102 on your answer sheet.

On the next pages are more questions like these samples. When you are asked to begin, turn the page, read each sentence, find the words below which mean most nearly the same as the underlined words, and mark the answer on your answer sheet. Mark only one answer for each item. If there is one you cannot do, go on to the next one. But try all of them.

Do not put any marks on the test booklet. Remember, all your answers must be put on the answer sheet.

PART ONE

- ___ 1. "Saved by a hair! Just by a hair!" yelled Tom.
 - a. by using his head
 - b. just barely made it
 - c. safe and secure
 - d. by sticking his head out
- ___ 2. Then, as if he were rooted to the spot, Tom stood still, overcome with surprise.
 - a. touching the ground
 - b. right on the spot
 - c. unable to move
 - d. with his foot in a hole
- ___ 3. "Tom was tired enough to drop in his tracks, as his grandpa used to say.
 - a. to drop his load
 - b. to follow the tracks
 - c. stop where he was without moving
 - d. to follow in his footsteps
- ___ 4. "Mark my words, you'll spoil that girl."
 - a. take my advice
 - b. words are important
 - c. what I say is always right
 - d. place a mark on the words
- ___ 5. "Go no faster than a trot, and keep your head about you."
 - a. keep your head with you
 - b. hold your head still
 - c. stay awake
 - d. be sensible and act wisely
- ___ 6. "When you are boarding around doing a little of this kind of work and a little of that, you grow sick and tired of being a Jack-of-all-Trades."
 - a. being good at all trades
 - b. doing a little of all kinds of work
 - c. restless like a Jack-in-the-box
 - d. not doing any work well
- ___ 7. "Because Ma had a warm spot in her heart for Sam, she talked to Tom after Sally was in bed."
 - a. was sick because of Sam
 - b. Sam made her angry
 - c. special liking for Sam
 - d. liked everyone
- ___ 8. "My mouth is watering, he said to Ma."
 - a. wanting something badly
 - b. is very sick
 - c. needed a drink
 - d. has water in his mouth

- ___ 9. "He won't be worth his salt for a long time to come."
a. worth very much
b. worth as much as salt
c. worth what he eats
d. uses too much salt
- ___ 10. "I leave it to you to break him in."
a. break his habits
b. to get him inside
c. to hurt him
d. get him used to things
- ___ 11. "Before another year comes round, the cabins will begin to climb the hill."
a. cabins will be built higher
b. climb the hill to get to the cabins
c. cabins will be built farther up the hill
d. cabins will have to be moved
- ___ 12. "There is a sight of hauling still to be done."
a. too much to see
b. hauling too much
c. seeing what is hauled
d. a lot of hauling
- ___ 13. "You are a better man than I am; it takes you to bring home the bacon."
a. to feed the children
b. to get things done
c. to bring home food
d. to be good
- ___ 14. "Ma had to piece out the supper with sausage, ham, and headcheese."
a. to serve small pieces
b. serve the supper
c. leave out the extra food
d. add more food to have enough
- ___ 15. "Don't bite my head off."
a. don't be so cross
b. don't get so close
c. don't bite my head
d. don't be so loud
- ___ 16. "During the gold rush, many people were staking a claim."
a. taking a stake on the claim
b. driving stakes in the ground to mark boundaries
c. claiming land that wasn't theirs
d. making claim to a stake
- ___ 17. "A miner spent much of his time panning out."
a. taking the pan out of the water
b. washing earth and gravel in a pan in search of gold
c. digging for gold
d. putting the pan in and out of water

- ___ 18. "And the captain always saw through everyone."
a. saw everyone in view
b. looked through everyone
c. understood everyone
d. saw everyone's faults
- ___ 19. "When pioneers blazed a trail, they chipped the tree trunks at a certain height."
a. set the trail afire
b. followed a trail
c. made a new trail
d. hurried down the trail
- ___ 20. "The man felt heavy at heart, for he thought it was better to share the last bite with the children."
a. big hearted
b. sad and worried
c. his heart was a load
d. thought he had gained some weight
- ___ 21. "Then it's all set, said Toto happily."
a. it's all gone
b. it's all ready
c. it's all there
d. it's all still
- ___ 22. "When I give a dog, I give him for good."
a. I treat him good
b. give him for keeps
c. a good way to give him
d. give him to stay awhile
- ___ 23. "Travel on the magic carpet of printed words" means
a. to go many different places in stories
b. to go on a carpet in a book
c. to sit on a carpet while we travel
d. to sit on a magic carpet and read
- ___ 24. "This California weather changes quickly in the orange belt."
a. place where oranges are grown
b. the color of something we wear
c. place where oranges are sold
d. a belt made of oranges
- ___ 25. "What will Barnum do next, was on everybody's tongue."
a. everyone is talking at the same time
b. something is on everybody's tongue
c. everyone is discussing it
d. on the tongue of everybody

- ___ 26. "Killing the goose that laid the golden egg" means
- a. Things worth having are worth waiting for.
 - b. Be kind to others.
 - c. Don't count your chickens before they are hatched.
 - d. Something valuable may be lost by being greedy.
- ___ 27. "The lad took to his heels as if bewitched."
- a. to take his heels to the witch
 - b. flew away
 - c. to run behind someone's heels
 - d. ran as fast as he could
- ___ 28. "Thanks for the tip, Chief," replied the reporter."
- a. keep your hands to yourself
 - b. thanks for the sharp object
 - c. thanks for the money
 - d. thanks for the information
- ___ 29. "Got cold feet, did you" teased one of the boys."
- a. became afraid
 - b. became very cold
 - c. got cold and went home
 - d. feet were cold
- ___ 30. "Now I have let the cat out of the bag," chuckled Mr. Burd."
- a. let the cat jump out of the bag
 - b. forgot to tie the string
 - c. told the secret
 - d. let the cat make too much noise

PART TWO

- ___ 31. "Big Bill Turner, crack engineer of the Prairie Flyer, was bringing this "puffing billy" home to roost!"
- a. returning to its starting place
 - b. roosting like a bird
 - c. perching in the roundhouse
 - d. starting back home
- ___ 32. "But see to it that you keep your hands to yourself."
- a. do not help with the work
 - b. my business is not yet your business
 - c. keep your own hands
 - d. leave things alone
- ___ 33. "It would suit me to a T," grinned Pierre."
- a. his suit fit him
 - b. I'd agree to the T
 - c. I'd like it fine
 - d. not in agreement with

- ____ 34. "I tell you those were the days."
- a. more difficult days
 - b. longer days
 - c. easier days
 - d. days to remember
- ____ 35. "You can see for yourself he's learning all there is to know about railroading from the ground up."
- a. all the different kinds of railroading jobs
 - b. from the rails to the cars
 - c. groundwork and engines
 - d. the dirty jobs
- ____ 36. "What kind of monkeyshines do you call this, Tom?"
- a. acting like a monkey
 - b. a shining face
 - c. a trick or a prank
 - d. acting in a strange way
- ____ 37. "So that's the reason for this Sunday-go-to-meeting attire."
- a. finest clothes
 - b. clothes worn to meet someone on Sunday
 - c. clothes that are tiring
 - d. everyday clothes
- ____ 38. "I'd be the laughing stock of the town."
- a. laughing with the town
 - b. laughingly taking stock of the town
 - c. the town clown
 - d. made fun of
- ____ 39. "He did a splendid job of locking the barn door after the horse was stolen."
- a. looking for the horse
 - b. being careful after it's too late
 - c. locking the door to protect the horse
 - d. being careful before danger comes
- ____ 40. "We have always insisted that Tom Fuller was worth his weight in gold."
- a. worth as much as gold
 - b. weighs as much as gold
 - c. very valuable
 - d. very important
- ____ 41. "Gave him his walking papers not ten minutes ago," announced Mrs. Gray
- a. gave him papers to leave
 - b. told him to walk away
 - c. fired him
 - d. replaced him with someone else

- ___ 42. "I've talked to the man who owns it, and we can get it for a song."
- if we sing him a song
 - for a small amount
 - for nothing
 - for a little music
- ___ 43. "By and by an idea began to dawn upon them."
- the sun came up
 - it became brighter
 - began to understand
 - began to see them
- ___ 44. "I'll be beat if you ever saw a town with as much spunk for pulling itself out by the bootstraps."
- pulling off its boots
 - getting along without help
 - using bootstraps to pull itself up
 - becoming better
- ___ 45. "So you've definitely decided to let Hastings go to the dogs."
- go from bad to worse
 - to do what is right
 - play with the dogs
 - go with the dogs
- ___ 46. "Automobile riding lost some of its edge for Tom."
- he didn't like it any more
 - lost its beauty
 - lost its thrill
 - became tiring for him
- ___ 47. "Once you set your eyes on that car, I can call from now until kingdom come."
- from now on
 - from here to heaven
 - until the other kingdom
 - until you come with us
- ___ 48. "You're a chip off the old block," laughed Captain Joe."
- the part that's good
 - just like your father
 - solid like a block
 - a small part
- ___ 49. "But I'll show ye a bit of old time fiddlin', just to start the judges off on the right track."
- to start the judges down the track
 - to get the judges started
 - it's hard to find the right track
 - to track the judges down

- ___ 50. "In this story Betsy turned the tables on several people."
a. made the people move over
b. changed her mind
c. surprised everyone
d. turned the tables around
- ___ 51. "The black clouds let fall sheets of rain."
a. squares of rain
b. solid rain
c. heavy downpour of rain
d. white rain
- ___ 52. "I am empty as a gourd," he sighed."
a. had seeds inside himself
b. shaped like a gourd
c. hollow inside
d. made a strange noise inside
- ___ 53. "With a sweep of his arm, he took in the countryside."
a. with a broom in his hand
b. with his arm above his eyes
c. a movement of his arm
d. moving himself around
- ___ 54. "Actions speak louder than words" means
a. actions mean more than words
b. words mean more than what we do
c. words are not important
d. actions always come before words
- ___ 55. "Think I'll call him 'Greased Lightning'," Zeke replied."
a. as bright as lightning
b. as fast as lightning
c. hot and dangerous
d. stormy and loud
- ___ 56. "The cowboys were going to cut the herd."
a. to drive part one place and part to another
b. to brand the cattle
c. to butcher or cut up part of the herd
d. to make the cattle run
- ___ 57. "Pike's Peak or bust" means
a. I'll get there or die trying
b. the trip is too hard
c. want to see Pike's Peak
d. Pike's Peak is the place to burst
- ___ 58. "He talked for some time, but he couldn't convince Uncle Lem, who was as stubborn as a mule."
a. as agreeable as a mule
b. as difficult to manage as a mule
c. as yielding as a mule
d. gave in too easily

- ___ 59. "Uncle started in a beeline for the river."
a. following an imaginary line
b. straight and fast
c. busy like a bee
d. with a bee after him

- ___ 60. "Most of these were given to blind flying."
a. a blind man flying
b. too dark to see
c. flying with a blindfold
d. flying only with instruments

PART THREE

- ___ 61. "She wants him to come and live with her, and he is planning to pull stakes this summer."
a. to pull up sticks
b. to go to live in another place
c. to pull stakes to earn money
d. to go back to his home town

- ___ 62. "But I'm getting on, and you're my nearest relatives."
a. going on
b. getting along fine
c. going strong
d. getting older

- ___ 63. "He says bloods' thicker than any bank roll."
a. relatives are more important than money
b. blood is worth more than money
c. blood can be spilled over a bank roll
d. there is more blood than money

- ___ 64. "But Mother, who understood thoroughly how Lucy was feeling, tried to turn the matter off lightly."
a. to turn away
b. to turn off the lights
c. to dismiss the matter without seriousness
d. to turn the matter off quietly

- ___ 65. "The old lady was kindhearted, but a bit sharp-tongued."
a. her tongue was too long
b. she talked too much
c. her tongue was too sharp
d. she spoke harshly

- ___ 66. "The Hardings went to bed in a pleasant glow of anticipation."
a. glowing and happy
b. happy with remembrance
c. to anticipate a glow
d. expecting something pleasant

- ___ 67. "Uncle John doesn't expect us for five or six months, and we've burned our bridges behind us."
- a. already crossed the bridge
 - b. burned everything we don't need
 - c. made our decisions and can't change our minds now
 - d. set fire to the bridge after we crossed it
- ___ 68. "May I give you a lift, sir?" he asked."
- a. lift you up
 - b. give you a ride
 - c. help you lift something
 - d. give you something light
- ___ 69. "They're a little scared of me maybe, but they ought to know a barking dog never bites."
- a. a barking dog isn't dangerous
 - b. a dog that bites doesn't bark
 - c. someone who talks mean may not really be mean
 - d. someone who acts mean usually doesn't talk
- ___ 70. "You're new at this business," said Monty Green. "Breaking the ice is what's hard."
- a. ice is hard to break
 - b. beginning something new
 - c. to begin to break ice
 - d. breaking a new record
- ___ 71. "I've lost a man who got a touch of sun and got sick."
- a. touched sunshine
 - b. got too much sun at one time
 - c. was out of the sun too long
 - d. the sun burned him
- ___ 72. "Then he sat bolt upright, as though a charge of electricity had gone through him."
- a. sat on the right side of a bolt
 - b. sat up on the right bolt
 - c. sat up very straight, immediately
 - d. had been told to sit uprightly
- ___ 73. "He who steals a good name is not made richer."
- a. honest effort is required to earn a good reputation
 - b. stealing a good name is not a good way to get rich
 - c. stealing a good name is not the easiest way to get it
 - d. a good name is not as valuable as gold
- ___ 74. "I'd work like a steer, I swear I would."
- a. in a straight line
 - b. very hard
 - c. like a good driver
 - d. as often as a steer

- ___ 75. "She moved from pillar to post."
- a. from a soft place to a hard one
 - b. moving in order to get a new job
 - c. from one place to another
 - d. from a big house to a small one
- ___ 76. "A tall tale" means
- a. a long story
 - b. a story about a tall man
 - c. a story told as if it were true
 - d. a tale told over and over
- ___ 77. "A tornado headed for his cattle."
- a. came toward
 - b. wanted the heads
 - c. followed
 - d. was ahead of
- ___ 78. "He was yanked up into the middle of the ugly green cloud."
- a. pushed upward
 - b. jerked up quickly
 - c. moved slowly
 - d. floated up
- ___ 79. "He was mooning around like a love-sick puppy."
- a. dreamy
 - b. excited
 - c. lonesome
 - d. studying the stars
- ___ 80. "She accepted before he could back out."
- a. go backwards
 - b. decide it was a good idea
 - c. change his mind
 - d. go out the back way
- ___ 81. "The bray shattered the stillness."
- a. stopped the noise
 - b. broke the silence
 - c. made a soft sound
 - d. added to the stillness
- ___ 82. "He was shedding crocodile tears."
- a. large tears
 - b. crying like a crocodile
 - c. the tears of a crocodile
 - d. crying easily without being very sorry
- ___ 83. "I know a certain young fellow who's gettin' too big for his breeches
- a. outgrowing his clothes
 - b. smart and sassy
 - c. too big to play with children
 - d. his pants are too tight

- ___ 84. "He was fourteen, skinny, and badly spoiled."
a. in bad health
b. had a bad smell about him
c. used to having his own way
d. did what others told him to do
- ___ 85. "Skip it," said Jimmy briefly. "You wouldn't understand."
a. forget it
b. pretend it didn't happen
c. jump over it
d. wait till later
- ___ 86. "I think I'll call it a day."
a. I'll stop now
b. stop at the end of the day
c. call it today
d. name it "day"
- ___ 87. "Martha Daniels was the star diver of the club, and all eyes were on her as she stood ready at the edge of the platform."
a. all eyes were open
b. she was watching them
c. she was not seen by all
d. everyone watched her
- ___ 88. "She's coming around now," Bob announced after he had worked with her for a few minutes."
a. she's coming over now
b. she's waking up
c. coming with us
d. she's coming in a little while
- ___ 89. "They were carrying only a skeleton crew - a mechanic and a radioman.
a. the bones of the crew
b. a little crew
c. the necessary members of the crew
d. a crew's skeleton
- ___ 90. "Once more Bolivar must leave South America, now with a price put upon his head by Spain.
a. a number on his forehead
b. a reward for his capture
c. his head was in demand
d. he was for sale

INSTRUCTIONS FOR ADMINISTERING IDIOMS TEST

Read aloud instructions underlined.

Before distributing the test booklets, check to be sure that desks are clear and that every student has a soft lead pencil and an eraser.

Say: I am going to give each of you a different kind of reading test booklet, an answer sheet, and an information sheet. Establish which is which. When you get the booklet, leave it closed until you are told to open it. Do not put any marks on the answer sheet.

Instruct the students to fill in the information sheet and also put name on the IBM answer sheet.

The sample exercises and directions for the test are on the cover of the test booklet. You will work these sample exercises with the students. Put an example (101) from the answer sheet on the board.

Say: Put your pencils down. Look at the cover of your test booklet. Find the place where it says "Directions". Point to your own copy. I will read these directions and the sample exercises to you while you read them to yourselves.

Read all the directions aloud, including the sample exercises. Read slowly and clearly. Allow time at the appropriate places for the students to study the samples and mark their answers. Demonstrate at the board. Check to see that all students have marked the answers to the sample exercises correctly.

When the sample items have been worked and the directions have all been read say: Do you all understand how to mark your answers to the test? Explain again if necessary. Be sure the number on the answer sheet is the same as the number on the test booklet. Demonstrate.

Say: Put your pencils down and look at my test booklet. When I tell you to begin, turn the page and begin at number 1. The test is divided into three parts: Part One, Part Two, Part Three. When you finish one part, go on to the next until you have done all the questions in the booklet. There are 90 questions in all. Some of these you may not understand - but try each one anyway - even if you cannot read all of it.

If you wish to change an answer, erase your first mark completely, then mark the answer you want. Be sure you put no extra marks on the answer sheet. Explain.

If you have a question, or if you need a new pencil during the test, raise your hand. Any questions?

Begin.

Regular Answer Sheet

UNIVERSITY OF SASKATCHEWAN

Seat _____

NAME _____ Surname _____ Given Name _____ COURSE _____ Name _____ Number _____
 COLLEGE _____ YEAR _____ DATE _____ INSTRUCTOR _____

USE PENCIL-MAKE YOUR MARKS HEAVY AND BLACK-ERASE COMPLETELY ANY YOU WISH TO CHANGE

ANSWER SHEET NUMBER _____ OPTIONAL NUMBER _____
 2 3 4 5 Leave blank unless Examination Paper gives other instructions.

STUDENT NUMBER _____
 This must be completed correctly. Write your number in the spaces with hundred thousands at the top and units at the bottom. THEN mark the corresponding places on the right side of the page.

FIVE PART QUESTIONS

b	c	d	e	2	a	b	c	d	e	3	a	b	c	d	e	4	a	b	c	d	e
b	c	d	e	6	a	b	c	d	e	7	a	b	c	d	e	8	a	b	c	d	e
b	c	d	e	10	a	b	c	d	e	11	a	b	c	d	e	12	a	b	c	d	e
b	c	d	e	14	a	b	c	d	e	15	a	b	c	d	e	16	a	b	c	d	e
b	c	d	e	18	a	b	c	d	e	19	a	b	c	d	e	20	a	b	c	d	e
b	c	d	e	22	a	b	c	d	e	23	a	b	c	d	e	24	a	b	c	d	e
b	c	d	e	26	a	b	c	d	e	27	a	b	c	d	e	28	a	b	c	d	e
b	c	d	e	30	a	b	c	d	e	31	a	b	c	d	e	32	a	b	c	d	e
b	c	d	e	34	a	b	c	d	e	35	a	b	c	d	e	36	a	b	c	d	e
b	c	d	e	38	a	b	c	d	e	39	a	b	c	d	e	40	a	b	c	d	e
b	c	d	e	42	a	b	c	d	e	43	a	b	c	d	e	44	a	b	c	d	e
b	c	d	e	46	a	b	c	d	e	47	a	b	c	d	e	48	a	b	c	d	e
b	c	d	e	50	a	b	c	d	e	51	a	b	c	d	e	52	a	b	c	d	e
b	c	d	e	54	a	b	c	d	e	55	a	b	c	d	e	56	a	b	c	d	e
b	c	d	e	58	a	b	c	d	e	59	a	b	c	d	e	60	a	b	c	d	e
b	c	d	e	62	a	b	c	d	e	63	a	b	c	d	e	64	a	b	c	d	e
b	c	d	e	66	a	b	c	d	e	67	a	b	c	d	e	68	a	b	c	d	e
b	c	d	e	70	a	b	c	d	e	71	a	b	c	d	e	72	a	b	c	d	e
b	c	d	e	74	a	b	c	d	e	75	a	b	c	d	e	76	a	b	c	d	e
b	c	d	e	78	a	b	c	d	e	79	a	b	c	d	e	80	a	b	c	d	e
b	c	d	e	82	a	b	c	d	e	83	a	b	c	d	e	84	a	b	c	d	e
b	c	d	e	86	a	b	c	d	e	87	a	b	c	d	e	88	a	b	c	d	e
b	c	d	e	90	a	b	c	d	e	91	a	b	c	d	e	92	a	b	c	d	e
b	c	d	e	94	a	b	c	d	e	95	a	b	c	d	e	96	a	b	c	d	e
b	c	d	e	98	a	b	c	d	e	99	a	b	c	d	e	100	a	b	c	d	e

TEN PART QUESTIONS

a	b	c	d	e	f	g	h	i	j	102	a	b	c	d	e	f	g	h	i	j
a	b	c	d	e	f	g	h	i	j	104	a	b	c	d	e	f	g	h	i	j
a	b	c	d	e	f	g	h	i	j	106	a	b	c	d	e	f	g	h	i	j
a	b	c	d	e	f	g	h	i	j	108	a	b	c	d	e	f	g	h	i	j
a	b	c	d	e	f	g	h	i	j	110	a	b	c	d	e	f	g	h	i	j
a	b	c	d	e	f	g	h	i	j	112	a	b	c	d	e	f	g	h	i	j
a	b	c	d	e	f	g	h	i	j	114	a	b	c	d	e	f	g	h	i	j
a	b	c	d	e	f	g	h	i	j	116	a	b	c	d	e	f	g	h	i	j
a	b	c	d	e	f	g	h	i	j	118	a	b	c	d	e	f	g	h	i	j
a	b	c	d	e	f	g	h	i	j	120	a	b	c	d	e	f	g	h	i	j

Key to Idioms Test

1. B	19. C	37. A	55. B	73. A
2. C	20. B	38. D	56. A	74. B
3. C	21. B	39. B	57. A	75. C
4. A	22. B	40. C	58. B	76. C
5. D	23. A	41. C	59. B	77. A
6. B	24. A	42. B	60. D	78. B
7. C	25. C	43. C	61. B	79. A
8. A	26. D	44. B	62. D	80. C
9. A	27. D	45. A	63. A	81. B
10. D	28. D	46. D	64. C	82. D
11. C	29. A	47. A	65. D	83. B
12. D	30. C	48. B	66. D	84. C
13. B	31. A	49. B	67. C	85. A
14. D	32. D	50. C	68. B	86. A
15. A	33. C	51. C	69. C	87. D
16. B	34. D	52. C	70. B	88. B
17. B	35. A	53. C	71. B	89. C
18. C	36. C	54. A	72. C	90. B

APPENDIX C

Classification Data Sheet

NAME _____
Last First

BIRTHDATE _____ BOY _____ GIRL _____

AGE _____ GRADE _____

DATE OF TEST _____

TEACHER _____

SCHOOL _____

OTHER LANGUAGE SPOKEN

☐ FRENCH

☐ CREE

☐ GERMAN

☐ UKRAINIAN

☐ OTHER

SCORES

G. Mac.

Raw Score

Grade Score

1. _____

2. _____

3. _____

Idioms

APPENDIX D

Percentage of Correct Responses to Test Items
for Groups in Yandell Study and in Present Study

TABLE V

PERCENTAGE OF TEST ITEMS CORRECT BY GALLUP-MCKINLEY
COUNTY ETHNIC GROUPS

Test Item	Navajo	Hispanic	Spanish	Nuni	Total	Test Item	Navajo	Hispanic	Spanish	Nuni	Total
1	38	90	88	73	76	46	32	45	28	23	34
2	38	81	66	52	55	47	30	77	49	35	48
3	26	81	40	40	47	48	27	66	51	33	43
4	47	95	78	58	68	49	39	79	62	60	57
5	33	76	36	37	47	50	25	67	32	31	40
6	51	76	57	48	60	51	53	87	65	67	67
7	39	88	68	42	59	52	32	71	55	27	47
8	26	68	45	40	44	53	26	43	30	29	32
9	25	54	47	42	40	54	30	58	41	31	41
10	39	78	49	37	53	55	44	83	37	48	59
11	42	76	70	50	58	56	43	90	37	40	60
12	51	85	75	58	66	57	18	80	45	27	43
13	14	40	24	31	25	58	39	70	55	52	53
14	22	26	29	35	26	59	22	70	43	31	41
15	35	83	67	44	56	60	21	48	22	15	29
16	25	38	18	21	29	61	32	58	30	32	40
17	29	79	42	27	47	62	20	46	30	35	31
18	34	67	59	42	49	63	21	32	22	37	26
19	54	87	65	56	66	64	36	74	51	54	52
20	42	65	46	52	51	65	37	75	46	40	31
21	70	97	83	73	81	66	29	37	30	37	32
22	39	85	78	33	59	67	30	77	53	56	51
23	29	79	36	52	48	68	42	91	74	67	65
24	56	92	70	63	71	69	28	73	46	50	47
25	32	76	43	29	47	70	29	79	57	52	51
26	49	69	53	39	55	71	30	55	58	54	45
27	36	87	66	56	59	72	34	86	63	54	57
28	55	83	62	52	65	73	19	61	26	37	35
29	28	83	67	58	54	74	38	87	70	44	59
30	17	85	36	37	54	75	46	46	50	33	45
31	24	33	37	21	28	76	48	73	62	60	59
32	64	88	71	58	72	77	53	90	71	56	59
33	26	75	45	39	46	78	30	80	61	35	51
34	71	88	70	75	77	79	28	59	40	35	40
35	54	72	54	54	60	80	28	79	59	52	51
36	25	71	46	23	43	81	23	77	45	35	45
37	31	52	29	27	37	82	31	31	46	39	34
38	27	67	46	35	43	83	31	87	61	33	56
39	27	76	53	32	46	84	25	90	79	29	54
40	13	27	15	17	18	85	44	81	72	67	62
41	16	58	16	19	31	86	15	81	65	39	46
42	25	80	42	40	46	87	66	88	79	75	76
43	46	82	69	54	62	88	15	61	25	23	32
44	22	60	42	25	37	89	26	24	36	21	26
45	18	79	55	19	43	90	43	80	58	46	57

PERCENTAGE OF TEST ITEMS CORRECT BY GROUPS
IN PRESENT STUDY

Item No.	BIU	BIM	BNM	MNM	Total	Item No.	BIU	BIM	BNM	MNM	Total
1	45	73	88	94	76	46	30	36	46	52	42
2	33	66	73	75	62	47	36	55	61	72	57
3	33	53	80	85	64	48	24	29	43	60	40
4	52	73	79	86	73	49	48	64	76	85	69
5	28	34	53	63	46	50	28	41	58	65	49
6	44	52	69	75	61	51	56	72	87	83	75
7	56	71	87	93	77	52	39	54	67	74	59
8	21	38	48	44	38	53	35	51	59	40	46
9	25	43	57	57	46	54	45	41	56	65	53
10	25	51	64	69	53	55	54	49	69	73	62
11	52	56	58	78	62	56	37	63	73	79	64
12	69	70	80	88	78	57	19	39	61	74	49
13	13	28	37	42	31	58	53	63	59	69	61
14	25	16	14	18	19	59	21	46	60	70	50
15	23	47	78	81	58	60	19	19	31	30	25
16	17	24	27	33	26	61	28	42	46	60	45
17	40	51	64	77	59	62	8	16	24	34	21
18	34	35	69	66	52	63	15	22	27	36	26
19	76	60	72	83	74	64	29	43	57	63	49
20	51	62	69	70	63	65	33	48	61	74	55
21	79	87	93	97	89	66	31	23	24	36	29
22	37	75	87	85	71	67	36	50	67	78	59
23	36	40	54	75	53	68	55	76	80	93	77
24	45	59	83	93	71	69	30	40	61	70	52
25	37	45	66	75	57	70	36	47	70	83	61
26	52	65	69	76	66	71	33	55	64	60	53
27	52	62	82	91	73	72	44	63	79	85	69
28	62	75	65	63	66	73	16	21	40	46	32
29	31	50	68	70	56	74	48	59	83	94	72
30	29	38	69	82	56	75	54	46	52	45	49
31	20	19	32	41	29	76	39	71	68	73	63
32	42	70	79	81	69	77	61	72	76	92	76
33	29	34	56	72	49	78	35	34	63	76	54
34	75	80	91	87	83	79	27	27	36	54	37
35	47	51	53	61	53	80	43	58	75	80	65
36	28	31	64	67	49	81	44	55	72	84	65
37	13	29	43	56	36	82	30	30	26	30	29
38	28	36	48	69	47	83	21	44	74	86	58
39	27	43	51	67	48	84	32	60	80	94	68
40	16	23	26	40	27	85	69	78	90	95	84
41	22	40	53	66	46	86	31	37	77	83	59
42	22	36	68	79	53	87	65	76	80	93	79
43	56	64	76	80	69	88	15	20	48	65	39
44	22	35	62	70	49	89	23	26	22	34	27
45	18	44	66	79	53	90	50	53	69	84	65